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INCIDENCE OF GASTRO-INTESTINAL DISORDERS IN RELATION TO THE DRINKING WATER SOURCES IN A RURAL AREA IN BENGAL*

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Rural water supplies are grossly deficient and defective in India and in conjunction with the problem of efficient and safe disposal of night-soil this problem should be given a priority in considering any scheme that envisages the improvement of public health sanitation in this country. The magnitude of the problem is great and its solution within the existing economic means, local or otherwise, is difficult. The question of supplying safe drinking water in rural areas becomes still more difficult if the rigid standards prescribed for the urban water supplies are strictly adhered to. It was, therefore, of interest to undertake an investigation aimed at discovering workable standards for rural areas consistent with safety and practicability. With this object in view a preliminary enquiry was carried out, during the earlier part of 1944, by Subrahmanyan and Bhaskaran (1948) of the Sanitary Engineering Section of the Institute to obtain information regarding the distribution of various types of water sources for drinking purposes in the two Unions of Singur and Balarambati under the Singur Health Centre (Bengal), and to find out the correlation, if any, between the nature, state of repairs or seasonal changes and the physical, chemical or bacteriological purity of water. But the question of a suitable yard-stick to determine the safety of the water supplies for the rural population seemed as difficult as it was important. In the absence of any other suitable criterion it was decided to exploit the possible role of water sources in the incidence of gastro-intestinal disorder among the population using the known water sources for drinking purposes. An enquiry into this effect was carried out by the authors for a period of one year between July 1944 to June 1945. The preliminary data collected by the workers mentioned above were utilised in making out a workable plan for a small field staff. The purpose of this communication is to deal with the question whether the quality of water supplied by the existing sources had any bearing on the incidence of the gastro-intestinal disorders in the locality.

PRELIMINARY SURVEY

The main purpose of this preliminary survey was to ascertain the suitability of the selected water sources for purposes of investigation as well as to obtain an exact knowledge of the number, composition and responsiveness of the families using these sources. It also included the survey of the epidemiological histories of the individuals belonging to the selected families.

Selection of water sources.—Of the 313 drinking water sources in the two Unions, 182 were selected for periodic sampling and examination. These comprised of 44 open surface wells, 79 public tube wells, 55 private tube wells and 4 tanks. In the locality concerned only a very limited number of families had been exclusively using open well waters for drinking purposes and the use of tank waters for drinking had been completely abandoned. It may be mentioned here that the population (27,000) in this area is supplied with 75 per cent of the quota of tube wells required on the basis of one tube well per every 100 persons. On the results of the preliminary survey these water sources were classified into four categories, *viz*:—

(1) Open surface wells showing regular high coliform count,

(2) tube wells (*a*) showing not more than 10 coliform organisms per 100 c.c.,

(3) tube wells (*b*) sometimes showing more than 10 coliform organisms per 100 c.c. and

(4) tube wells (*c*) unspecified.

The above classification was arbitrarily made as a working hypothesis. Subsequent studies, however, showed that this distinctive character was not strictly constant. In a series of 2,600 samples examined only 15 per cent of them yielded the coliform count higher than 10 per 100 c.c., and only in 2·4 per cent observations B. coli I or II was involved (Subrahmanyan and Bhaskaran, 1948). While the quality of the open wells remained bad throughout the year,

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tube wells were essentially bacteriologically pure, regularly in 92 per cent observations showing less than 10 coliform organisms per 100 c.c. when properly maintained and that the occasional higher count was due mostly to the external contamination ininadvertently introduced by the people such as, while using *doba* water (open surface water collection in large dug-out pits) for priming purposes, the contamination being mainly maintained in the leather buckets. Although this contamination was usually of temporary nature it could have some important significance in the incidence of gastro-intestinal disorder, particularly when the *doba* water was always liable to contamination with pathogenic organisms owing to the filthy practice of washing the soiled linen into it and of using it for ablution purposes after indiscriminate defæcation in its close neighbourhood. The period of survival of organisms, causing diarrhœas and dysenteries, in different water sources of the locality was however not known. The method of isolation and the finding out of the average period of survival of these organisms in the rural water sources should therefore be the fruitful lines of future investigation.*

Seventy-four drinking water sources, both private and public, consisting of 19 open wells, 14 tube wells of grade (*a*), 13 tube wells of grade (*b*), 27 tube wells of grade (*c*) and one tank, distributed over 21 villages, were selected for the preliminary survey. The number of families using these sources was 1087 having 6851 individuals comprised of 2017 adult males, 2047 adult females, 313 infants, 1149 below 5 years and 1325 below 15 years. The distribution of persons according to different categories of water sources were as follows:—Open wells 443, tube wells (*a*) 1,565, tube wells (*b*) 1750, tube wells (*c*) 3084 and tank 9.

Extent of the present survey—Of the above sources 23 were included in this investigation. These sources consisted of 8 open surface wells—all private, 8 tube wells (*a*)—3 public and 5 private, 3 tube well (*b*)—all public, and 4 tube wells (*c*)—2 public and 2 private. These were distributed over 11 villages, divided into four zones. The number of families using these water sources was 93 with 748 persons of which 387 were adults and 361 children. Thus, in the selection of families preference was given to those who had a large number of children.

Procedure—The area selected was divided into 4 zones. It was so arranged that every zone was routinely visited on alternate days except under special circumstances. During these visits house to house enquiries were made to note the daily incidence of gastro-intestinal disorders and the history of such disorders during the past one year for all individuals included in the survey. Special investigations were made whenever a case was reported or an outbreak threatened. The following schedules specially printed for the purpose were used:

(1) Survey of rural water sources.

(2) Addendum to survey of rural water sources (composition of families using the sources for drinking).

(3) General case schedule (ready for analysis by Power Samas machine).

(4) Addendum to general case schedule (stool collection records).

(5) Patients schedules.

(6) Contact schedules.

(7) Stool collection schedule (used in the field for recording the histories of individuals on the day of collection).

(8) General daily register of selected families and individuals.

(9) A card for reporting of cases.

Collection of stool samples.—Earthenware pans with cover (Diagram 1) freshly burnt in country kilns were supplied to the individuals on the day previous to collection. Names were written on the cover by means of chalk pencil or the cover was marked with a symbol for identification by illiterate persons. The available stool samples were collected by the supervisor or the investigator himself into a sterilised wide-mouthed glass stoppered bottle (Diagram 1) containing 10-15 c.c. of 30 per cent glycerine-saline preservative at pH 8·0. The receptacles were used only once. Split bamboo sticks cut into the shape of a spoon, which stand steam sterilisation were used to lift the stool into the bottle. The latter was immediately labelled, for which printed slips were supplied. Only the morning samples of stool were collected soon after they were passed and sent to the laboratory in a basket (Diagram 1) by 12 noon, where the specimens were examined both microscopically and culturally. Poured plate S.S. agar was used as the medium of choice, although other media were also tried.

DIAGRAM 1

INVESTIGATION

The investigation was conducted mainly on three lines, *viz.*, (1) the detection of the existing carrier state, its nature and distribution, (2) collection of epidemiological histories of gastro-intestinal disorders for at least past one year and (3) study of the incidence, nature and seasonal trend of diarrhœas and dysenteries amongst the population in relation to the selected water sources.

(1) *Carrier State*—It was decided to examine 10 consecutive samples of stool from each person for the detection of carriers but the procedure being time-consuming it was not possible to strictly adhere to this number particularly towards the latter half of the survey. Nearly 2,000 samples of stool have been examined. The results are given in Table I.

* Some work has been done on the survival of V. cholerae in water sources.

TABLE I—SHOWING THE NATURE AND DISTRIBUTION OF CARRIERS OF INTESTINAL PATHOGENS IN THE SINGUR HEALTH CENTRE AREA (1944-45)

Water sources	*No. of families*	*Members*	*Population examined*									*Results*								
						A		C		Total										
												Bacteria								
Type	No.		A	C	T	M	F	M	F	A	C	T	B. shiga	B. flex	B. sonne	B. Schmitz	Atypical	Salmonella	B. proteus	B. pyocaneus	B. alk. fecs.
Openwell	6	16	77	69	146	22	24	29	25	46	54	100	1	2	2	0	1	6	14	6	17
Tubewells (*a*)	2	15	64	57	121	26	22	25	17	48	42	100	1	0	0	5	1	8	12	1	5
Tubewells (*b*)	3	25	96	93	189	32	19	38	39	51	77	128	2	1	1	0	0	10	16	3	23
Tubewells (*c*)	1	2	8	8	16	3	3	4	4	6	8	14	0	0	1	0	0	0	0	0	2
Totals	12	58	45	227	472	83	68	95	85	151	181	332	4	3	4	5	2	24	42	10	47
												Percentage	1·21	0·9	1·21	1·51	0·6 5·4	7·2	12·6	3·0	14·1

Water sources	*Protozoa*				*Helminths*				*Positives*	*Negatives*
Type	E. histolytica	Giardia	Chilomastrix	Iod. butsch	Hookworm	Ascaris	Oxyuris	E. nana		
Openwell	6	15	2	6	5	0	1	1	51	49
Tubewells (*a*)	5	10	0	0	4	0	1	0	48	42
Tubewells (*b*)	19	12	3	14	25	0	0	1	78	50
Tubewells (*c*)	0	0	0	0	0	0	0	0	3	11
Totals	30	37	5	20	34	0	2	2	180	152
Percentages	9·0	11·1	1·51	6·0	10·2	0	0·6	0·6	54	46

A = Adults. C = Children. T = Total M = Male. F = Female

Individuals examined = 332. Individuals positive = 180. Total Isolation = 271.

TABLE II—SHOWING THE INCIDENCE OF GASTRO-INTESTINAL DISORDERS FOR ONE YEAR PRIOR TO THE COMMENCEMENT OF INVESTIGATION

Water sources		*Population*			*Diarrhœa*		*Dysentery*		*Dysentery & Diarrhœa*			*Colitis*		*Indigestion*		*Dyspepsia*		*Cholera*	
Type	No.	A	C	T	A	C	A	C	A	C	T	A	C	A	C	A	C	A	C
Open well	.. 8 Private	117	111	228	9	12	6	5	15	17	32	0	0	2	2	9	0	2	0
Tubewell (*a*)	.. 8 (5 private & 3 public)	121	114	235	6	9	13	14	19	23	42	1	0	2	3	4	0	0	0
Tubewell (*b*)	.. 3 (Public)	121	115	236	7	7	11	9	18	16	34	1	0	0	1	4	2	1	0
Tubewell (*c*)	.. 4 (2 public & 2 private	28	21	49	3	7	4	10	7	17	24	1	0	2	2	2	0	1	1
Total	..	387	361	748	25	35	34	37	59	73	132	3	0	6	8	19	2	4	1
Grand Total	.. 23	748			60		72		132			3		14		21		5	

A = Adults. C = Children. T = Total.

TABLE III—SHOWING THE FOODHABITS, SANITARY AND ECONOMIC CONDITIONS OF THE FAMILIES INVESTIGATED

	Insects				*Flies*				*Sanitary conditions*			*Latrine*			*Food*					*Economic conditions*				
	Nil	Few	Fair	Many	Nil	Few	Fair	Many	Bad	Fair	Good	Provided	Not provided	R_1	R_2	R_3	M_2	Exposed	Covered	Partially exposed	Poor	Lower Middle	Middle	Upper Middle	Rich
Number of families ..	0	6	78	9	0	12	71	10	25	67	1	16	77	10	77	5	1	8	4	81	63	13	15	2	0

Total families = 93 R_1 = Rice & vegetable, R_2 = Rice, vegetable & fish occasionally; R_3 = Rice & fish regularly, M_2 = Atta, rice, vegetables; fish or meat occasionally.

The carrier state was studied in 58 families using 12 of the selected water sources. The number of individuals actually examined was 332, composed of 151 adults (83 males and 68 females) and 181 children (96 males and 85 females), the total number of males and females being 179 and 153 respectively. The distribution of the population under investigation according to the water sources *viz.*, open wells, tube wells (*a*), (*b*) and (*c*) was 100, 100, 128 and 14 respectively. Two hundred and seventy-one isolations were made from 180 individuals (54 per cent of these examined), several of whom had multiple infections. The percentage distributions of the positives including bacillary, protozoal and helminthic infections according to the selected water sources was as follows:—Open wells 51, tube wells (*a*) 48, tube wells (*b*) 61 and tube wells (*c*) 21. Although in the first half period of the investigation no significant differences were noted among different water sources in regard to the carrier state, tube wells (*b*) group later showed a higher rate than others. The percentage distribution of the various carrier organisms in the population examined was as follows:—Dysentery group (*B. shiga, B. flexner, B. sonne, B. schmitz* and atypical)—5·4, *Salmonella*—7·2, *B. proteus*—12·6, *Ps. pyocyaneus*—3, *B. alkaligenes*—14·1, *E. histolytica*—9·0, *Giardia*—11·1 and *Ankylostoma duodenale**—10·2.

(2) *History of Gastro-intestinal disorders and environmental studies.*—The results of a brief analysis of the epidemiological histories of 748 individuals for a period of one year prior to the commencement of the present investigation are given in Table II.

The incidence of clinical diarrhœa and dysentery among the selected population of 748 individuals according to the drinking water sources were as follows:—

Open well—14%	(A = 12·8%	C = 15·3%).
Tube well—(a) 17·8%	(A = 15·7%	C = 20%).
Tube well—(b) 14·3%	(A = 14·8%	C = 13·9%).
Tube well—(c) 49%	(A = 25%	C = 81%).
Tube well—(a+b) 16·2%	(A = 15·3%	C = 17%).
Tube well—(a+b) plus open wells	(A = 14·4%	C = 16·4%).
Tube well—(a+b+c) 19·2%	(A = 16·3%	C = 22·4%).
All sources 17·6%	(A = 15·2%	C = 20·2%).

A = Adults, C = Children.

Only 49 individuals were studied in tube well (*c*) group (*i.e.* the group using tube wells of unknown quality) and the selection was biassed by the fact that most of the population involved belonged to the families from which cases of gastro-intestinal disorders had been reported during the course of the survey and that quite a large section of the healthy families using the same water sources was not included. Thus the results obtained in connection with tube well (*c*) group may be omitted at present for the purpose of discussion. It will then be noted that the gastro-intestinal disorders are more or less uniformly distributed among the users of different water sources irrespective of their bacteriological quality. The average incidence of diarrhœa and dysentery was as high as 15·4 per cent, children showing slightly higher rate (16·4 per cent) than the adults (14·4 per cent). The open well group shows the least incidence and between the two tube well groups (*a*) and (*b*) the former which is bacteriologically purer than the latter shows comparatively higher incidence of diarrhœa and dysentery. The results are therefore indicative of a negative correlation between the bacteriological quality of water sources and the incidence of gastro-intestinal disorders in the Singur area.

The food habits, sanitary and economic conditions of 93 families investigated are given in Table III.

It will be seen from Table III that insects and flies were abundant in more than 90 per cent of the houses during the period of survey (July to October). The sanitary conditions were definitely bad in 26 per cent of houses and there was no provision of any latrine in more than 82 per cent of the houses.

The diet was mainly vegetarian with occasional fish protein added. As high as 95 per cent of the families observed no food hygiene, foods after cooking being kept either partially or completely exposed to flies and insects. The majority of the families (two-thirds) were poor, one-seventh was of lower middle class and not more than one-sixth belonged to the so-called middle class. There was hardly any family which could be classified as rich.

(3) *Studies of cases occurring amongst the selected population.*—During the last one year beginning from July, 1944, 107 cases of diarrhœa or dysentery were noted among 748 selected individuals. The results of investigation are set out in Table IV.

The numbers of families, individuals and water sources under observation were 93, 748 and 23 respectively. Of these, 61 or 65·5 per cent of families, 107 or 14·3 per cent of individuals and 17 or 74 per cent of the water sources became involved in the gastro-intestinal disorders within the last one year. Of the cases, 55 or 51·4 per cent were adults and 52 or 48·6 per cent were children, males (39 per cent) predominating over females (31 per cent). Nearly half the cases, 52 or 48 per cent had definite history of contact with known patients, 12 or 11·2 per cent were cases of relapse and 3 or 2·8 per cent were second attacks, and the remaining 40 cases or 37·4 per cent were primary cases. As many as 455 persons were exposed to the infection but only 40 or 9 per cent clinically suffered from the disease. Only one-sixth of the families had multiple cases, one-fifth had two cases each and the rest single cases only. Multiple cases occurred only in the group of families using tube well water for drinking purposes.

Clinically, the cases were distributed as follows:—Diarrhœa—8 cases (7·5 p.c.), bacillary dysentery—45 cases (42 p.c.), amœbic dysentery 6 cases (5·6 p.c.), unspecified dysentery 47 cases (44 p.c.) and colitis only 1 case (1 p.c.). Of these cases, 48 (44·8 p.c.) were mild, 42 (39·2 p.c.) moderately severe and 17 (15·9 p.c.) were severe cases. Thus, bacillary dysentery is by far the commoner type of dysentery prevalent in this area. The percentage dis-

* No special technique was employed in isolating hookworm ova. Actually the infection was found to be 45 p.c. when the special technique, as the one employed in the General Health Suevey of Singur Area 1944 by Seal and Lal (1948) was applied.

TABLE IV—SHOWING THE INCIDENCE, NATURE AND DISTRIBUTION OF DIARRHOEA AND DYSENTERY CASES ACCORDING TO THE TYPE OF WATER SOURCES

Water sources	No. of families	Population							Position				History of contact		No. of cases in the family			Persons	Clinical diagnosis						Severity		
Type	No.		M	F	M	F	A	C	T	Primary	Relapse	Second attack	Secondary	+	−	S	D	M	Exposed	No. of cases	Diarrhoea	Amoebic dys.	Bacill. dys.	Dysentery	Colitis	Mild	Mod.	Severe
Open well ..	3	9	5	1	4	1	6	5	11	6	0	1	4	4	7	7	2	0	61	2	0	3	0	8	0	8	3	0
Tubewell (*a*)	4	19	13	4	15	7	18	21	39	16	1	1	21	21	17	13	6	4	152	18	7	0	11	20	1	11	24	4
Tubewell (*b*)	3	23	15	7	12	6	22	18	40	14	8	1	17	17	24	20	2	4	182	14	0	2	20	18	0	21	11	8 (one death)
Tubewell (*c*)	7	10	5	3	5	4	9	8	17	4	3	0	10	10	7	6	4	2	60	6	1	1	14	1	0	8	4	5
Total ..	17	61	38	15	36	18	55	52	107	40	12	3	52	52	55	46	14	10	455	40	8	8	45	47	1	48	42	17

	No. of person whose stools were available for examination	B. shiga	B. Flexner	B. Sonne	B. Schmitz	Atypical bac. dys.	Alk. fecalis	Salmonella	Giardia	E. histolytica	Hook worm	Population under observation A	Population under observation C	Population under observation Total	Water sources under observation
Open well ..	7	0	0	0	0	0	1	0	2	0	0	117	111	228	8
Tubewell (*a*) ..	21	3	3	0	2	0	3	1	3	0	0	121	114	235	8
Tubewell (*b*) ..	23	4	3	1	0	1	2	0	0	1	1	121	115	236	3
Tubewell (*c*) ..	6	3	1	1	0	0	2	0	3	1	0	28	21	49	4
Total ..	57	10	7	2	2	1	8	1	9	2	1	387	361	748	23

A = adults. C = children. M = male. F = female. S = single. D = double. M = multiple. T = total.

tribution of cases according to water sources were as follows:—

Open wells—11 cases or 10·3 per cent.
Tube wells (*a*)—39 cases or 36·4 per cent.
Tube wells (*b*)—40 cases or 37·4 per cent.
Tube wells (*c*)—17 cases or 15·9 per cent.

Although the population observed under each category of water sources except tube wells (*c*) were more or less the same *e.g.* open wells 228, tube wells (*a*) 235 and tube wells (*b*) 236, the incidence of gastro-intestinal disorder was significantly less in the open well group (10·3 per cent) than in the tube well group (37 per cent). Besides, in the open well group clinically recognised or bacteriologically established bacillary dysentery case was conspicuously absent and none of the families in this group had multiple or severe cases. In contrast with this, the incidence of gastro-intestinal disorders was about 4 times higher in the tube well group than in the open well group, the cases being equally distributed between the tube well (*a*) and (*b*) groups. Also, all the multiple and severe cases were confined to the population belonging to the latter two groups.

The stool examination report has been obtained for 57 cases yielding 43 isolations distributed as follows:—*B. shiga*—10 cases, *B. flexner*—7 cases, *B. sonne*—2 cases, *B. schmitz*—2 cases, atypical dysentery bacillus—1 case, *Alkaligenes faecalis*—8 cases, *Salmonella*—1 case, *E. histolytica*—2 cases, *Giardia*—9 cases and *Hookworm*—1 case. Thus, among the unspecified dysentery cases at least 9 cases were due to Giardia, 1 case to Salmonella and 1 case to hookworm. From this record it is perhaps reasonable to expect that if stool samples were available for examination from all cases the number of so called unspecified dysentery cases would have been reduced to a *minimum*.

A few family outbreaks of bacillary dysentery were investigated. Multiple cases that occurred were mostly due to case infection. In one instance food could be incriminated. In other cases, the spread was either nil or limited to a second case only. There were only 10 cases of cholera noted among the selected population within the year. The sporadic nature of the cases rules out water infection. In view of the above findings therefore it does not seem that water sources in the locality play any direct role in the transmission of the gastro-intestinal disorders in this area. Excluding the records of tubewells (*c*) group both from the collected epidemiological histories as well as from the list of investigated cases, for reasons stated before, remarkable correspondence will be found between the incidence of diarrhoeas and dysenteries obtained by eliciting histories of the past one year and that obtained by actual case investigation, the rates of incidence being 15·4 and 14·3 per cent respectively.

Summary and Conclusion

1. The principal causes of gastro-intestinal disorders in the Singur area are diarrhoeas and dysenteries. Colitis, indigestion and cholera contribute to the morbidity rate only to a minor extent. Dyspepsia is also not an uncommon complaint.

2. Excluding dyspepsia, a clinically vague complaint, the gastro-intestinal morbidity rate is 20 per cent, the incidence rate of diarrhoea and dysentery alone being about 15 per cent.

3. The carrier rate of various intestinal infections is not less than 44 per cent. It will be much higher if in certain circumstances *B. proteus* and *Ps. pyocyaneus* are considered pathogenic. The contributions of various infections are as follows:—Dysentery group—5·4 per cent, Salmonella—7·2 per cent, E. histolytica—9·0 per cent, Giardia—11 per cent, Hookworm—10·2 per cent. (No special technique for diagnosis of helminthic infections was employed).

4. Clinically, bacillary dysentery greatly predominates, amoebic dysentery being less common. The carrier rate, on the other hand, is higher in amoebic dysentery (9·0 p.c.) than bacillary dysentery (5·4 per cent). *B. shiga, B. flexner, B. sonne, E. schmitz, Salmonella* and Giardia infections explain most of the cases.

5. Multiple cases in families are not common (less than one-sixth).

6. There is no significant difference in the incidence of gastro-intestinal disorders between family contacts and non-contacts.

7. There is no evidence to suggest any relationship of gastro-intestinal disorders with the sources of drinking water supply or with their coliform content. In fact, the tube wells (with a very low coliform flora) are associated with comparatively larger number of cases relative to population than open wells (with high coliform flora). This does not however, rule out *doba* or tank water used for bathing and household purposes, as the possible source of gastro-intestinal disorders.

(8) The following conclusions may be drawn from the above findings:—

(*a*) Ordinarily infection is derived from diverse sources, within and outside the family.

(*b*) Drinking water does not play a part in spreading the gastro-intestinal infection under ordinary conditions but its role in exceptional cases cannot be excluded if the source of water is liable to contamination.

(*c*) The above findings may be considered apparently favourable for releasing the rigidity of the standard of water supplies but in the presence of a very high carrier rate for intestinal pathogens and of surface soil pollution and in the absence of latrines and good conservancy system it should be considered whether it would be wise or safe to modify the bacteriological standard of drinking water supply in the rural areas like Singur.

(*d*) Again, if the standard for drinking water supply is worked out it is questionable how it could be effective in controlling the gastro-intestinal disorders in view of the fact that the use of the drinking water forms only a small part in the rural water consumption which is mainly drawn from the obviously contaminated *dobas* and tanks.

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GOLD WITH ARTIFICIAL PNEUMOTHORAX IN PULMONARY TUBERCULOSIS

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Gold has been used in pulmonary tuberculosis for a long time but its value as such is very doubtful. I have used gold with artificial pneumothorax in tuberculosis and found that it checks the complication of pleural effusion. The percentage of effusion in A.P. cases varies. Thus De-cecio and Potter (1939) found effusion in 34 per cent of their 595 cases; Nicklas (1937) in 67·7 per cent of their 375 cases; Weisman (1936) in 84 per cent of 150 cases. Sen, Sarkar and De (1943) examined 500 cases. They found that out of every 100 person given A.P. treatment, 11 developed effusion in the first month, 13 in the second month, 7 or 8 in the next month. After 18 months' treatment there were 34 cases who did not develop effusion. In Burrell's (1932) series effusion was found in 41·4 per cent. Riviere (1927) found effusion in about 50 per cent, Saugman (1941) in 67·2 per cent and Dumarest and Brette (1929) in 70·3 per cent, Ray and Sen and Talukdar (1943) found effusion in 60·4 per cent. The incidence of effusion in A.P. cases in this Hospital is about 60 per cent.

Because of this complication of pleural effusion, the A.P. treatment cannot be carried out for a period of from 3 to 5 years as adhesive pleurisy sets in, while others develop empyema which is a serious complication. By using gold in artificial pneumothorax the incidence of effusion is reduced to 16·1 per cent as will be illustrated by the following case reports given in a tabular form.

TABLE SHOWING RESULTS OF TREATMENT IN THE CASES

Case No.	*Duration of A.P.*	*Amount of gold in gms*	*Incidence of effusion*	*Remarks*
1.	9- 7-'45 to 27-11-'45	3·2	Nil	—
2.	26-12-'45 to 18-11-'45	3·2	"	—
3.	18- 1-'45 to 11- 9-'45	3·0	"	—
		2 courses		
4.	14-10-'44 to 19- 2-'45	3·8	"	—
5.	2- 4-'45 to 13-11-'45	3·1	"	—
6	31- 5-'45 to 3-11-'45	2·24	"	—
7.	9- 2-'45 to 7- 8-'45	3·13	"	—
8.	17- 6-'44 to 3- 2-'45	1·8	Trace of effusion	Bilateral
9.	8- 8-'44 to 23- 3-'45	2·33	Nil	—
10.	20-12-'44 to 28- 3-'45	4·0	"	—
11	14-10-'44 to 28- 3-'45	3·26	"	—
12	1- 3-'45 to 25- 9-'45	2·65	"	—
13.	19-12-44 to 8-11-'45	3·56	"	Pregnancy 7 months.
14	12- 3-'45 to 9- 6-'45	2·76	"	—
15.	9-12-'44 to 11-11-'45	2·08	"	Bilateral case.
17.	6- 4-'44 upto date	1·45	Yes	Bilateral Pneumothorax.
18	6- 5-'43 to 19- 3-'44	3·8	Nil	—
19	20-10-'44 to 2- 3-'45	2·2	"	—
20	11- 3-'44 to 2-11-'45	4·2	"	—
21	6- 6-'44 to 27-11-'45	3·2	"	—
22.	22- 5-'44 to 8-11-'44	3·4	"	—
23	13- 5-'45 to 3- 8-'45	2·6	"	—
24	12- 8-'43 to 27- 3-'44	4·3	Effusion 4th rib.	—
25	11- 4-'44 to 10-11-'44	2·3	Nil	—
26	6-11-'44 to 26- 2-'45	2·95	Trace of effusion	—
27	15-10-'42 to 10- 3-'43	2·26	Nil	—
28	5-10-'44 to 12- 8-'45	3·25	"	—
29	28- 8-'45 to 20- 5-'48	3·36	"	—
30	15-10-'45 to 26- 6-'46	2·2	"	—
31	18- 8-'42 to 14- 5-'43	3·515	Slight effusion	—

CONCLUSION AND DISCUSSION

Incidence of pleural effusion as a complication of A.P. treatment is much reduced if A.P. is combined with gold therapy.

In this series of 31 cases, in which gold and A.P. were administered concurrently it was found that only 5 cases (16·1 per cent) developed pleural effusion. Thus there is a very marked fall from 60 per cent to 16·1 per cent in the incidence of pleural effusion when gold is combined with A.P.

2. The effusion when it occurs is small in amount and is delayed in outset. It is absorbed readily. The following 5 cases developed effusion:—

8—Trace of effusion after 6 months.

17.—Effusion upto 6th rib—one year after starting A.P.

24—Effusion upto 4th rib—2½ months after starting A.P.

26—Slight effusion—2 months after A.P. treatment.

31—Slight effusion 1½ years after starting treatment.

3. The chances of some latent focus on the opposite side becoming active are reduced.

4. In one case of pregnancy (Case 13), the continuation of gold had no adverse effects.

In these cases the A.P. was started first and gold was given after two or three refills. If two or three injections of gold are given first and then A.P. started, perhaps better results may be obtained.

Whatever may be the causes of pleural effusion as a complication of artificial pneumothorax, it is clearly shown that the percentage is reduced. I admit the number of cases is small to reach a definite conclusion. More cases will be published later on.

OBSERVATIONS ON ANAESTHESIA IN MAJOR THORACIC OPERATIONS

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I have ventured to write this paper with a view to place some of the inherent difficulties in administering general anaesthesia for major thoracic operations and to invite similar experience from my colleagues so as to pool our knowledge on this subject for future guidance.

It will repay recapitulating some of the relevant physiology and anaesthetic difficulties which have bearings during conduction of such anaesthesia. The 'intrapleural negative pressure' is 3 to 5 mm. of Hg. below atmosphere during expiration and becomes 5 to 10 mm. of Hg. below atmosphere during inspiration and this negative pressure is the first requisite for the expansion of the lungs and the maintenance of respiration. With unilateral thoracotomy the corresponding lung collapses. This collapse is more complete during inspiration as the air in the lung is drawn out and transferred to the sound lung. Likewise during expiration some air forced into the collapsed lung giving what we know as the paradoxical respiratory movement. Secondly the mediastinum is pushed to the sound side with inspiration and moves back with expiration. This to and fro mediastinal movement gives rise to a quivering of the structures within the mediastinal septum and is known as the mediastinal flutter.

Major thoracic operations can be undertaken successfully when these side effects of unilateral thoracotomy are properly controlled. The main problem of major thoracic surgery is that of administration of anaesthesia against these adverse factors preventing the patient from dying during the period as unilateral thoracotomy is unavoidable for intrathoracic work.

Recent advances in closed circuit anaesthesia maintaining if necessary positive pressure with the help of the intrabronchial tube on the sound lung has made it possible to control the mediastinal flutter and paradoxical respiratory movement.

I need make no apology in reporting these two successful conductions of anaesthesia in pneumonectomy and ablation of the oesophagus. These have certainly broken the ice here for thoracic surgery and now we can confidently open thoracic cases with reasonable precautions permitting our surgeons wielding their knife be it for lobectomy, pneumonectomy, ablation of oesophagus and repairing the congenital defects in and near about the heart.

Case Reports

Case 1—A Hindu male, aged 24 years of average height and build, in poor general condition referred from the medical side suffering from bronchiectasis of the left lung for the last 10 years.

Weight—82 lbs; P/R 80/18. B.P.—92/68 Hb—84 per cent.

He was put up for operation on 20-5-48 for lobectomy of the left lower lobe of the lung.

Premedication:—

(1) Morphine sulphate gr. 1/8
Atropine sulphate gr. 1/100
Given ¾ hrs. before operation.

(2) Paraldehyde—5 drams in 8 oz. of normal saline given per rectum slowly one hour before the operation.

Blood transfusion and glucose saline started at the rate of 30 drops per minute.

Gas, oxygen and ether anaesthesia started at 9-50 A.M. An intrabronchial tube Size No. 6 introduced through the right nostril and inside the trachea under direct vision and pushed into the right bronchus in blind method. Another intratracheal tube of smaller calibre was pushed through the left nose and put inside the trachea under direct vision with a view to draw out any secretion coming from the affected lung. The intrabronchial tube was then fitted with an adapter to the Heodorink's closed type gas-oxygen-ether apparatus with carbon dioxide absorber and the balloon of the intrabronchial tube inflated as a result anaesthesia of the right lung only was carried on. Rate of nitrous oxide—200 to 250 c.c. per minute; rate of oxygen—250 to 300 c.c. per minute; ether consumed during the operation—3½ ounces only.

Operation started at 10-15 A.M. with the patient on the table in the left kidney position and 10 to 15 degrees Trendelenberg's position.

At 10-20 A.M.—Pulse—140 p.m.; respiration—hurried 40 p.m.; systolic B.P.—110 mm. Hg. Colour—pink. At 10-27 A.M.—Pleura nicked.

The paradoxical respiration and mediastinal flap were countered by the use of positive pressure from the gas machine. It was noticed that the positive pressure within the circuit was raised 5 mm. Hg., there was definite embarrassment of the heart and the pulse rate was between 150 to 160 per minute and consequently the positive pressure was kept below 5 mm. of Hg. for the maintenance of smooth anæsthesia.

10-30 A.M.—Pulse rate became 160 per minute; Blood and saline drip made faster 80 to 90 drops per minute.

10-42 A.M.—Left lung cut.

Afterwards the pulse rate gradually becoming slower and volume better, respiration rate also coming down. Suturing of the lung pedicle started.

11-05 A.M.—Suddenly respiration became jerky and the pulse imperceptible at the wrist. Ether was cut off from the anaesthetic circuit and oxygen was only administered from the anaesthetic machine at the rate of two litres per minute.

11-06 A.M.—Coramine 2 ampoules I.V. given and at 11-07 A.M. Lobeline 1 ampoule given I.V. along with saline drip. 11-08 A.M.—Respiration stopped and at 11-10 A.M. heart stopped. Artificial respiration was started by the anaesthetist, by squeezing the rebreathing bag of the anaesthetic machine at the rate of 18 to 20 per minute and rhythmically the right chest wall was also compressed. The patient was pink in colour.

Cardiac massage started by the surgeon.

The only working right lung of the patient was at a great disadvantage because the patient was lying on the right side and the mediastinum and the abdominal viscera were compressing the only functioning lung. Moreover, the right side of the chest was more or less immobile due to posture. In order to allow the right lung to work properly the patient was gently put on his back at 11-14 A.M. Coramine 1 ampoule I.V. given.

Cardiac massage continued by the surgeon at first by rubbing the outer surface of the heart and later on actually squeezing the heart rhythmically between the palm and finger of the right hand.

11-15 A.M.—Slight flickering of the heart noticed. Cardiac massage and artificial respiration continued.

11-18 A.M.—Heart condition improving—a few beats coming.

11-20 A.M.—Pulse rate getting regular, oxygen given under pressure and artificial respiration maintained, as described above.

11-32 A.M.—Pulse rate 138 per minute; suturing started.

11-50 A.M.—Pulse rate 130 per minute; suturing completed. Artificial respiration still carried on.

11-55 A.M.—Respiration a few irregular and shallow breaths.

12 noon—Pulse 128. Respiration 6 to 8 per minute, irregular and shallow, oxygen continued 1 litre per minute.

12-15 P.M.—Pulse—120 per minute. Resp.—12 per minute, shallow. 12-30 P.M. pulse 124 per minute, respiration 16 per minute, getting regular.

350 c.c.s. of blood and 600 c.c.s. of glucose saline given upto 12-30 P.M. and later on only blood transfusion continued very slowly. Oxygen continued at the rate of 1 litre per minute through the intrabronchial tube which was left in.

General condition of the patient was better. At 1 P.M.—Coramine 2 c.c. and Lobeline 1 ampoule injected.

1-15 P.M.—Pulse—120. Resp.—28.

1-30 P.M.—Patient coming round, 1 c.c. gardenal sodium injected.

1-45 P.M.—Pulse—136. Resp.—34.

Between 12-30 P.M. and 2 P.M. nearly 250 c.c. more blood tranfused.

At 2 P.M.—Rigor started and continued nearly ten minutes and the pulse deteriorated very much.

Rigor was treated with adrenalin, electric cradle etc. The patiient expired at 3-30 P.M.

Case 2—The second case was a Hindu male aged 37 years admitted in the Lake Medical College Hospital on 22-7-48 with complaint of dysphagia and loss of weight for 3 months.

General condition fair. Heart & lungs—N.A.D.

P.R.—78/18; B.P.—125/85; Hb.—80 per cent. Diagnosed as carcinoma of oesophagus. Operation proposed—Resection of the oesophagus.

Operation done on 22-27-48—thoracotomy and resection of the oesophagus intrathoracic portion.

Premedication—

Morphine sulphate—gr. 1/6

Hyoscine hydrobrom—gr. 1/150

¾hrs. before operation.

In this case intratracheal tube No. 8 was pushed inside the trachea under direct vision and into the right bronchus in blind method. The anaesthesia was maintained under 5 mm. Hg. positive pressure as in the previous case with a Heidorink's gas-oxygen-ether machine closed type with carbon dioxide absorber.

The anaesthesia was a calm and quiet one. After opening the left side of the thorax by lateral approach and during the whole period of surgical procedure for dissection of the oesophagus there was no paradoxical respiratory movement and mediastinal flap which were countered efficiently by positive pressure from the anaesthetic machine.

Below is the record of the pulse, respiration, blood pressure and plane of anaesthesia during the operation:

Time	*Pulse per min.*	*Rspiration per min.*	*Blood pressure in mm. Hg.*	*Plane of anaesthesia*	*Remarks*
10-10 A.M.	76	18	120/80	Induction stage	Anaesthesia started
10-25	90	11	—	2nd plane of surgical anaesthesia	Intubation complete, skin incision given
10-30	90	24	112/70	do.	
10-35	96	30	130/100	do.	
10-40	96	30	126/100	do.	
10-45	96	22	130/102	do.	Rib resection started
10-50	98	21	138/96	do.	
10-55	100	20	142/96	3rd plane of surgical anaesthesia	Pleura incised
11-00	116	28	140/90	do.	Ribs retracted and dissection of oesophagus started.
11-05	120	28	120/80	do.	
11-10	126	28	114/74	do.	
11-15	126	24	124/72	do.	
11-20	132	30	126/80	do.	Malcot's catheter kept as drainage
11-25	132	28	122/76	3rd plane of surgical anaesthesia	
11-30	130	26	110/72	2nd plane	
11-35	130	26	120/80	do.	
11-40	126	22	120/78	do.	
11-45	126	22	120/78	do.	
11-55	128	24	118/78	1st plane of surgical anaesthesia	Operation finished.

Date	Pulse per min.	Respiration per min.	Temperature	B.P. in mm. Hg.	Remarks
10th Aug. '48	128	26	100 F	108/70	General condition not good
14th Aug. '48	96	20	Normal	110/70	Condition improving
16th Aug. '48	100	20	Normal		

The immediate post-operative period was devoid of any cyanosis and respiratory distress but the patient developed pleural infection from the 4th day of the post-operative period.

On 16th August, 1948, gastrostomy done at 12-15 P.M. under local anaesthesia but the patient died at 6-45 P.M. on the same day.

In the second case the patient's posture maintained during the operation was almost like left kidney position and the operation table only with a couple of degrees of Trendelenberg's position.

Before starting the operation, plasma was started and given only at the rate of 30 drops per minute, and only half a pint of plasma was given in two hours upto the end of the operation. Blood transfusion continued slowly after the operation to prevent the shock caused by the thoracotomy and dissection of the oesophagus from the mediastinum and surrounding structures.

Discussions

I. *Premedication*—Paraldehyde given as basal anaesthetic increases the rate, decreases the amplitude of respiration and Hering Brewer Reflex remains intact. It does not affect the respiratory centre unless an enormous dosage is given.

In both these cases morphine was used and it was helpful, lessening the paradoxical respiratory movements and mediastinal flapping as it diminished the excursion of the lung.

With atropine and paraldehyde the depressant action of morphine to the respiratory centre is of not much account.

II. *Posture*—The position of the patient with the sound side on the operation table reduces the movement of the sound lung, consequently the lung area reduced for oxygen and anaesthetic agent. Moreover Trendelenberg's position furthermore handicaps the sound lung due to compression by the abdominal viscera.

Steep Trendelenberg's position is unavoidable whenever one is dealing with "wet lung" cases but otherwise a flat position is always better. Steep lateral Trendelenberg's position undoubtedly hampers the respiration with one lung anaesthesia.

The first case demonstrated well the effects of posture during the operation. One should not forget to turn the patient flat in conditions of respiratory and cardiac failure.

III. *Stoppage of respiration and heart*—In the first case one will be curious about the cause of respiratory stoppage. I feel one will have to attribute the cause to the depth of anaesthesia maintained to diminish the excursion of the lung and mediastinal flutter although postural difficulty as mentioned above was also a predisposing factor. Combination of both probably led to stoppage of respiration.

The heart stopped and started working again after nearly eight minutes after the vigorous resuscitation measures were taken. The artificial respiration continued and after nearly 47 minutes few irregular shallow respiratory movements started and the respiration became regular nearly after one hour and twenty minutes. The oxygen was given all the time, one litre per minute and as a result the patient was pink all through.

IV. *Fluids*—One must be cautious about fluids. In the hurry to combat shock the case should not be overloaded beyond the capacity of the lung to cope and embarrassing the heart as demonstrated in the first case.

Equally one should be careful about blood transfusion. Undoubtedly the first case would have survived longer in the absence of the rigor.

Conclusion

In conclusion I can say that by improved anaesthetic technique within the last twenty-five years major operations upon the thoracic viscera can be performed with ease and the risk of such operations has been reduced.

The two cases were instructive and showed that thoracotomy can be done safely with some practice.

Such patients can comfortably be operated with slight or no inclination of the operation table *i.e.*, with a slight degree of Trendelenberg's position if required.

Fluids such as glucose saline should be given minimum but instead slow blood transfusion and plasma should be given during and after the operation depending on the bleeding and shock caused by the operation.

Positive pressure technique with closed circuit gas, oxygen and ether apparatus seems satisfactory.

Acknowledgment

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SPECIAL ARTICLES

I

A CRITICAL STUDY ON THE CHOPRA COMMITTEE REPORT ON THE INDIGENOUS SYSTEMS OF MEDICINE

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An analysis of the evidence before the Chopra Committee reveals the existence of three broad categories of opinions among the witnesses.

1. The first one is of the Indian Medical Association and a few eminent representatives of modern medicine who chose to give evidence before the Committee. The following quotations from their evidence express the opinion in their own words:—

"The science of medicine is indivisible into separate watertight compartments such as Ayurveda, Unani, modern scientific and so forth. These so-called systems of medicine like any other system or branch of science should be examined and investigated with an open mind with a view to ascertaining their usefulness in the light of the latest available knowledge and information of medical science and the allied branches of biological and physical science. Whatever in Ayurveda stands the test of scientific scrutiny should be absorbed and synthesised into modern scientific medicine. Scientific medicine is based on all available human knowledge, past and present, indigenous and foreign and therefore all that is of proved scientific value in those systems may be absorbed and utilised to add to the fund of world knowledge.

"The process which is rational will be easy economical and efficient, and will prevent the reduplication of teaching the same or similar subjects in parallel institutions, without any uniformity of standard. The tendency to separation in science should be discouraged. Separate institutions for the modern scientific and the Ayurvedic and Unani systems would mean enormous waste of men materials and money. There should be only one type of medical college teaching all basic scientific preclinical and clinical subjects according to the modern syllabus under the Indian Medical Council. Chairs and stipends should be created for encouraging research in these systems, so that whatever material of worth may be salvaged therefrom may be absorbed into the corpus of scientific medicine and utilised by the world.

"There is no reason why the three systems can not be combined into an all-comprehensive system." (Memorandum of I.M.A. to Chopra Committee—Report pages 441 to 448).

"The modern system of medicine which is rational, scientific, progressive and whose conclusions can be verified and modified by experiments and clinical observations, can never be supplanted by any other system of medicine. But the inherent wisdom in Ayurveda can certainly fill up many gaps in modern medicine." (Dr. M. V. Govindaswami, B.A., B.Sc., M.B.B.S., Chopra Report page 431).

"The scientist knows more than any other how to keep an open mind and if he is permitted to sift the claims of all systems of Indian medicine with the sieve of 20th century science, only the real and worthwhile remedies will be left which will be available for the alleviation of human suffering not only in India but also in other parts of the world. Distinctions often drawn between Indian systems of medicine, Chinese system of medicine, Arabic medicine, Allopathy, etc., are really superficial. Modern medicine stands aloof with open arms and adopts everything of value from all systems—ancient and recent, without distinction—and builds on all such data a system which has international application and significance." (Dr. B. Mukherji, M.B., (CAL.), D.Sc. (MICH.), M.D. (MUNICH) etc., Director, Central Drugs Laboratory, Govt. of India, Calcutta, Chopra Report, page 548).

"One all-comprehensive system of medicine—not Indian system of medicine but international system of medicine can be achieved in course of 5 to 10 years, not by a process of amalgamation and synthesis but by a process of vital absorption of material from all other systems of medicine." (Dr. D. N. Banerjee, M.B. (CAL.), M.D. (BERLIN), Professor of Pathology, Carmichael Medical College, Calcutta, Chopra Report, page 471).

"Truth is universal and cannot be limited by national boundaries. Facts specially those relating to the care of sick and suffering are property of mankind. Drugs and/or systems which can ameliorate the suffering of mankind must be shared by all. If we deny these to our people, we will be the only people who will suffer. It will be the greatest calamity to our nation and our people if we or our leaders deny our people means by which human misery can be prevented, checked or cured through sloppy sentimentalism, personal interests or ego." (Lt. Col. P. C. Dutta, O.B.E., M.B., D.G.O., F.R.C.S., Civil Surgeon Simla, Chopra Report, pages 454-455).

2. The second set of opinions is more or less the same as that adopted in the Committee Report—which closely resembles the 1st Usman Committee Report, almost in all the details and recommendations. It upholds the simultaneous mixed teaching of abridged versions of both the indigenous systems of medicine, which is being followed in the Government School of Indian Medicine at Madras. The ultimate aim is said to be the unification of all medical knowledge and synthesis or integration of 'whatever is valuable in indigenous systems of medicine, with the essentials or a working knowledge of western medicine,' into a single 'Indian system of medicine.' But the methods actually followed or recommended to achieve this aim, negative this purpose by perpetuating the differences between the various systems, based on mutual antagonisms and rivalries, actuated by an opposition to modern medicine of a meaningless character combined

with an inferiority complex. The Chopra Committee Report is a continuous special pleading in favour of the retention and expansion of this scheme of studies, which has been under experimentation in the Government School of Indian Medicine at Madras, and the results of which are acknowledgedly detrimental to the cause of the indigenous systems of medicine for the resuscitation of which the school was originally started. The methods followed in the school have been closely studied and the results watched for the past 25 years, and in the opinion of those who have observed the results, the experiment is a costly failure defeating the very purpose for which the school was established. The net result is that under the name of Indian medicine, an ill-digested, truncated knowledge of Allopathy or Western system as they call it, is placed within easy reach of persons of inferior general qualifications and are allowed to practise Medicine, Surgery, Obstetrics, Medical Jurisprudence, Ophthalmology and all other branches of modern medicine.

It is very significant that Dr. U. Rama Rao, one of the members of the 1st Usman Committee, on the report of which the school was started, has condemned in the strongest terms possible the methods followed in the school. In his evidence before the Chopra Committee when asked if he approved of the method of education followed in the School of Indian medicine, he stated in reply that he 'thoroughly disapproved it, because it neither produces good Vaidyas nor good practitioners of modern medicine.' He insisted that there should be institutes where Ayurveda is taught in its purity. (Chopra Report, page 77).

To realise the full import of this straightforward downright opinion, it is necessary to understand that Dr. U. Rama Rao has been all along an enthusiastic supporter of the cause of indigenous systems of medicine and has been a close and keen observer of the working of the school from its very beginning.

"The student is supposed to learn all the subjects of modern science, chemistry, physics, biology, anatomy, physiology, pathology, medicine, surgery etc., as also the whole of Ayurveda, as embodied in Charaka, Sushsruta and Vagbhata Samhitas,—which is an impossible task even for the best teacher, not to speak of the student with very low entrance qualifications.

"The result of the above teaching is deplorable. The student learns neither modern medicine nor Ayurveda, rather more of modern medicine than Ayurveda and on becoming a practitioner, he practises more of modern medicine (giving injections etc.), than Ayurveda. . . . In future there shall be no mixed teaching, half Ayurveda and half modern medicine as is in vogue at present." (Dr. D. N. Banerjee, M.B. (CAL.), M.D. (BERLIN), Professor of Pathology, Carmichael Medical College, Calcutta, Chopra Report, pages 463 & 464).

The Chopra Committee itself has not been quite unaware of the results of such a teaching. "It is an open secret" they say in their report, "that many indigenous practitioners have taken to using penicillin and sulpha drugs not to mention quinine and its new substitutes and several types of injections. Such borrowings without proper training and understanding in regard to their use is briefly to inflict serious injury on many patients." But the remedy suggested by the Committee is more likely to increase this evil than otherwise.

"The present tendency to mix up the Indian and Western systems would not lead to any good. Little knowledge was dangerous and that should make them go in for continued development of medicine, which could not be done unless there was a single system of study at a time. It was in this view that the entire medical profession welcomed the abolition of the cadre of licentiates by the former Congress Health Minister. The most fruitful method would be to give opportunities for those who had already qualified in the Allopathic system to take a course in the indigenous system as well later on." (Sir A. Lakshmanswami Mudaliar, B.A., M.D., Vice-Chancellor, Madras University, Speech in the Madras Legislative Council, *Indian Express*, August 9, 1946).

Dr. B. C. Roy, former President of the Indian Medical Council and the present premier of West Bengal, stated his opinion on the working of the School of Indian medicine at Madras in the following cautiously worded expressions:—

"The Government School of Indian Medicine was started with the object of training students in both western and eastern systems of approach to diseases. From the point of view of students, this would become almost a difficult task, unless the number of years that the student spent in the College was much more than the four or five years he now did. It should probably be near ten years before he would be able to appreciate the knowledge imparted to him in full. He was therefore of the view that it would be much better for the student to have knowledge of one system fully imparted to him. If the foundation be strong deep and sound, it would be easy for the student to go in for other systems of knowledge later. His own opinion was that it would be desirable for authorities of any Institution which tried to teach medicine to focus their attention on one particular system." (The *Hindu*, January 5, 1941).

The existence of the Government School of Indian Medicine and the scheme of mixed teaching followed therein have been undoubtedly detrimental to the cause of the indigenous systems of medicine and have affected adversely the existence and work of the schools of genuine indigenous systems. In the opinion of well known Pandits and scholars of these systems, the school has been a formidable erosive agency against these systems for the sake of which this Institution was ostensibly started, and which in course of time will deal an insidious death blow to their very existence.

Lt. Col. (now Sir) R. N. Chopra himself has in unmistakable terms expressed his opinion on the results of

such a simultaneous mixed teaching of Ayurveda and modern medicine, in his Indigenous Drugs of India (1933) thus:—

"When it is remembered that the Ayurvedic system of medicine has been practically stationery for about fifteen hundred years and that no attempt has been made to advance the knowledge in conjunction with the progress of the world, one would find it very difficult to reconcile the old theories of two thousand years ago, however much one may stretch their significance, with the recent advance of the world in Science. After imparting instruction to the Ayurvedic students in modern physiology, bacteriology, pathology, etc., to ask them to apply the doctrine of vayu, pitta and kapha, etc., to explain the causation of disease, cannot possibly be convincing to them and can bring nothing but chaos and discord to their minds. The student trained under such a system can neither be good at one nor the other."

It is very strange that the Report which now goes under his name upholds strongly this mixed teaching and gives laboured unconvincing plausible reasons to make it appear that such a teaching will not create any such confusion. We do not know whether he has now changed his opinion and if so for what reasons. But what is more probable is that he had nothing to do with the drafting of the report, which was entirely left in the hands of the clique working behind the Committee.

3. The third category of opinions may be said to be that of a conservative school of orthodox Pundit class of Ayurvedic practitioners. There is not much use in dismissing them or treating them in a cavalier fashion. This class is the real source from which material for research and study in indigenous systems would be available and the real worth or meaning of Ayurveda can be ascertained. It is the only link between the relics of the past Ayurvedic practice and the future growth of these systems in India. Though most numerous and from the bulk of the indigenous medical practitioners, they are neither organised nor vociferous as those of class II described above who make use of them for their own purpose and after exploiting them betray their cause later. As a concession they are given a sort of registration in a separate 'B' class. It is an unchallenged fact that this registration in two separate classes A and B and preferential treatment accorded to those of class 'A' in Government and other appointments have affected the very existence of this class of practitioners of indigenous systems of medicine and led to the closure of some of the previously well conducted schools *e.g.* The Madras Ayurvedic College.

It is against this background of these sombre facts and gloomy atmosphere that the opinions of the few of them who gave expressions to their fears in giving evidence before the Committee should be judged and appraised. The candid and impartial opinion of Dr. U. Rama Rao in condemnation of the teaching in the Government School of Indian Medicine, which is probably the only institution which produces the privileged 'A' class of practitioners in Indian medicine, and advocating the teaching of pure Ayurveda has already been referred to.

Vaidya Panchanan Gangadhar Shastri Gune in his evidence before the Chopra Committee on the subject of synthesis of the systems states:—

"Synthesis of all the three different systems is possible only after the full development of Ayurveda and Unani. I am sure that the synthesis of Ayurveda after its full development would be an asset to medical science. The present condition of Ayurveda is not at all fit for synthesising it with the western system. There are so many misunderstandings, misconceptions and prejudices about Ayurveda in the minds of the present day medical men, scientists and workers in the field. After thoroughly exploring all the avenues of Ayurveda, I am sure it would throw more light. Synthesis will become possible not till then." (Chopra Report page 499).

Ayurveda Vidvan B. B. Narayanaswami, B.SC., Nanjungud, among his suggestions to the Committee says:—

"Ayurveda should be allowed to grow as an independent system of medicine, and equal opportunities should be provided by the Government for both Ayurveda and Allopathic systems to develop in their own way." (Chopra Report, page 520).

The veteran Ayurvedic scholar Mr. C. V. Subramania Sastri, ex-principal of the Ayurvedic College, Tirupathi, condemned the mixed teaching in the Government school in the following trenchant words:—

"What is now wanted is not an hybridisation of Ayurveda with the Western system of medicine, but only an opportunity for research, if necessary, on the lines on which the research in Western medicine has been and is still being made, with a view to bring the practice of Ayurveda into line with the theories already available....

"Coming to the School of Indian medicine, those charges raise a doubt whether the school is intended for teaching Allopathic system or for Indian system. The defects now pointed out, only prove the fears expressed by me before the Usman Committee that both the Indian as well as the Western systems could ill go together and that the Indian systems to maintain their individuality should be pure and unalloyed.

The present attempt to bring together the two irreconcilable systems—the Indian and the Western—only makes the Indian systems get dominated by the Allopathic system.... At the same time it also makes it impossible for the students taking to the school to acquire within the limited period of four years, proficiency in either of the systems." (*The Hindu* 6-4-1940).

Vaidyaratna Pandit M. Duraiswami Aiyangar, at the time of a crisis in the School of Indian Medicine which culminated in a strike by the students in protest against the standard of the examinations, and in a temporary closure of the school, wrote:—

"The real cause lay in the heterogenous elements in the curriculum of studies that had made it confusing, cumbersome and impossible for any ordinary student to study sincerely. Each student was trained in one of the three indigenous systems of medicine, *viz.*, Ayurveda, Siddha and Unani, that were included under the common term 'Indian medicine,' along with a course of modern medicine. The student was also taught language classics—Sanskrit, Tamil, Arabic and Urdu, for studying the original Indian medical books. All these were carried out in the course of four years, and an additional nine months period was given for practical training. How could a student manage all these aspects of medical knowledge within four years and that too within the four walls of a single Hospital having about 100 beds"?—(*The Hindu*, 21-9-44).

Kaviraj M. K. Mukherjee, President of the All-India Ayurvedic Congress in a statement on the strike situation in the Government School of Indian Medicine, said:

"The students' strike stood on vital grounds. . . . The need at present in institutions teaching Indian Medicine, was a thorough training in the indigenous system, the student has taken up, and not a hotchpotch of little allopathy and less Indian medicine.

"We need a race of thoroughbreds in Indian Medicine, which must be studied on its own lines."—(*The Hindu*, 21-9-44).

Research

From the evidence before the Committee, it is seen that almost all the witnesses are in favour of research being conducted in the indigenous systems of medicine on 'modern scientific lines with fully equipped laboratories.' But the purpose of such researches is differently set forth by the two main groups. The view point of the Indian Medical Association, the All India representative body of the practitioners of modern medicine, has been clear and already stated before. But the purpose of research from the standpoint of the school of mixed medicine is confusing and vague.

At this juncture, I wish to point out that the terms, indigenous systems of medicine, Indian system of medicine, Indian medicine, Ayurveda, Siddha, Unani, are used indiscriminately and without any clear cut meaning. It is therefore desirable to define these terms and apply them with somewhat more exact significance. The term indigenous may be restricted to the existing practice of Ayurveda and Unani or Siddha, and 'Indian medicine' to the one which is expected to evolve or emerge as a unified system of the future in India. The school of Indian medicine which is neither the one nor the other is a misnomer. It may be called for the present purpose 'school of mixed medicine' for want of a better term.

The purpose of research from the standpoint of this mixed medicine which is the one recommended by the Committee is stated as follows:—

1. "To clear these systems of accretions of centuries of doubtful value." 2. "To give scientific meaning and significance to the fundamentals of these systems so that they may be accepted by science." "If these aims are fulfilled," the report continues, "we can look forward to the development of a united system of medicine for our country."

In what way this ultimate aim of a united system differs from that suggested by the I.M.A. and others, cannot be easily understood except by those who purposely wish to create and perpetuate a difference and unnecessarily prolong the period of consummation of the aim into three stages, by adopting contradictory and indirect methods. The report for example recommends in one place that "the pharmacological and therapeutic values of many remedies should be fully investigated," "with fully equipped laboratories and adequate personnel", and in another place declares "that there is not much use in spending time on the pharmacological research as generally understood to-day."

It is extremely doubtful whether all those who speak of conducting researches in Ayurveda have any idea of the detatils involved in the process. They speak of research as if it is something to be picked up so to speak on the road side by any one passing on the way.

Dr. D. N. Banerjee confidently asserts, "one all-comprehensive system of medicine—not Indian system of medicine but an international system of medicine—can be achieved in course of 5 to 10 years." (Chopra Report, page 471).

This may be possible in only one way. There is already an international system of medicine in good working order which is also firmly established in India. By intense research in indigenous systems, many of the valuable principles and practices of indigenous medicine can be incorporated into this international system, and in this manner, indigenous systems may be made to influence and become part and parcel of the international system of medicine and serve the needs of the world.

The proposal of the Committee is the other way about. According to their proposal, the remnants of the indigenous systems of India in their present imperfect and mutilated condition must be cleared of the debris—'accretions of centuries of doubtful value', and then these will have to be "strengthened in their weak points by the addition of material from the western medicine—basic sciences, anatomy, physiology, pathology, surgery, obstetrics, bacteriology etc." . . . in fact almost every branch of modern medicine, and by transforming them and confusing them in terms of Indian nomenclature give them back to the world as 'Indian system of medicine'. Let the

world choose and find out which is the straighter and more direct way of progress.

"The entire question is, which of the two systems has got the greater potentiality to absorb the other. Ancient medicine decadent as it is, is too static to absorb and assimilate anything new, while on the contrary the modern medicine has the requisite capacity to absorb and retain in itself all that is rational and valuable in the ancient system of medicine. Science is progressive and the method of its progress is one of continuous research. There are in it absolutely no limitations of caste, colour, creed or country. The basic science is the same all over the world. Modern medicine is the outcome of the collective wisdom of the medical genius of all times and of all countries. It is absurd to label it Western or Eastern." (Dr. B. Tirumal Rao, F.R.C.S., D.L.O.—Address VIII Andhra Medical Conference, on 25th Feb. 1940).

First Steps in Research

And what about the first steps to be taken in the matter of research and ultimate unification of all these systems?

According to Dr. D. N. Banerjee "We must first of all know, from first hand experience, what there is and what there is not in Ayurveda. Before that to complain of imaginary wants or press exaggerated claims will not be wise. The real worth of Ayurveda must be assessed first." (Chopra Report, page 469).

Again, "Research in the indigenous system of medicine "consists in getting our ideas clarified as to the meaning of the original texts. This will require scholars with high grade knowledge of Sanskrit and English and the mother tongue." [Dr. B. B. Yodh, M.B. (BOM.), M.R.C.P. (LOND.), D.T.M.H., Chopra Report, page 499].

The above statements of Drs. Banerjee and Yodh may seem superfluous and self-evident. But the importance of these first steps will be felt in all its seriousness when we realise how the very author of 'the Science and Art of Indian Medicine' in his over anxiety to prove that "Ayurveda has provided ready made niches or even mansions, to which therapeutic practices of proven utility from everywhere and of all times can be readily welcomed at all times" and that "Ayurveda arranges all possible modes of treatment of all times, past, present and future", has resorted to mutilations and gross misinterpretations of well known Ayurvedic Sanskrit texts, to serve his own purpose to show that Ayurveda contains both 'Vipareetha Chikitsa' (Allopathy), and 'Tadarthakari Chikitsa' (Homoeopathy). It is indeed a very strange interpretation, contrary to all the commentaries on the text, to include in Ayurveda both Allopathy and Homoeopathy. One may as well claim that the Compositor's desk has provided niches to contain all the knowledge of the world, past, present and future. There is no such thing as 'Tadarthakari' treatment anywhere in Ayurveda literature, nor this two-fold classification of treatment mentioned anywhere. The word 'Tadarthakari' no doubt occurs in a few places, but then it has quite the opposite meaning to the one given by this modern interpretation. If this dubious method of misinterpretation has been resorted to by the author of 'The Science and Art of Indian Medicine' which professes to have proved the scientific basis of indigenous systems of medicine to the scientific world, one need not be surprised to find such a mass of confusion in the interpretation of the ancient texts and 'accretion of centuries of doubtful value.'

This matter is referred to at some length, because this masterpiece of misinterpretation based on mutilation of texts, has been made in a fundamental principle of Ayurveda, and also on a superficial understanding of the well known basic principle of homoeopathy, *viz.*, 'similia similibus curantur'. It is only by such double distortions from either side that allopathy and homoeopathy can be accommodated side by side even in the spacious mansions of Ayurvedic principles of treatment, niches having been found too narrow to contain them as before. The hollow pretension with which this misinterpretation is persistently adhered to and even improved upon during the past nearly 30 years and imposed on the various Committees and the medical world, is of more serious import than the evil of misinterpretation itself. Now one can easily realise how very important it is to 'get our ideas first of all clarified as to the meaning of the original texts and to know from first hand experience what there is and what there is not in Ayurveda.'

In the mass of evidence before the Chopra Committee, it is gratifying to find at least one witness has stated, "that the principal lines of approach are the same in Ayurveda and modern science, unlike that of homoeopathy." (Dr. D. N. Banerjee—Chopra Report, page 471).

No research will be worth the trouble and expense, unless a sense of impartiality is maintained and strict adherence to truth is adopted, irrespective of the results, whether favourable or unfavourable to one's preconceived notions. It is in this sense that intuition and meditation will be useful not only in research, but in all controversies. The individual personality and its pet conceptions and prejudices must be subordinated or obliterated before truth can be received through meditation. Thus in concluding a multi-sided discussion among several sages assembled, Bhagawan Punarvasu says:—

(Charaka Sutra Ch. XXV—26 to 28).

तथर्षीणां विवदतामुवाचेदं पुनर्वसुः
मैवंवोचत तत्त्वं हि दुष्प्रापं पक्षसंश्रयात् ॥ २६ ॥
वादान्सप्रतिवादान् हि वदन्तो निश्चितानिव
पक्षान्तंनैवगच्छन्ति तिलपीडक वद्गतौ ॥ २७ ॥
मुक्त्वैवं वादसंघट्टमध्यात्ममनुचिन्त्यताम्
नाऽविधूततमःस्कन्धे ज्ञेये ज्ञानं प्रवर्तते ॥२८ ॥
(चरक संहितायां पंचविंशोऽध्याये)

"Truth is difficult to get at by taking sides in discussion. Arguments and counterarguments, made as if they are final, never lead to any conclusion in an argument, as the course of movements of the person who drives the oil mill. Freed from the tangle of controversies therefore, let truth be meditated upon, for the sake of truth itself,—on a higher spiritual level. Knowledge does not penetrate the mass of ignorance, until it is scattered and dispelled."

We have already shown how the Chopra Report is swayed by a particular set of opinions to the exclusion of the others, and tinged with the taint of a bias towards them. At least one witness has challenged the impartiality of the Committee by pointing out that 'from the very nature of the questionnaire issued, it appears to be already biassed and more or less trying to prove the case, in favour of adopting these systems as State medicine, perhaps with the allopathic system along with it." (Lt. Col. P. C. Dutta—Chopra Report page 450).

The Committee's recommendations are still worse. Because neither the indigenous systems nor the allopathic system will be left alone, but an admixture of these systems with the modern medicine in a proportion left to the choice of the particular clique, will be forced on the nation. The Committee in their conclusions and recommendations have completely ignored the evidence of eminent witnesses who differed from them.

This clique poses as the sole repository of the past indigenous systems and 'torch bearers' of the future unified system of Indian medicine, appropriating all the virtues of all the systems to itself. The origin of this clique is traceable to the past domination by the Indian Medical Service and the imposition of the British Medical Council over the entire medical profession in India. Those conditions have entirely changed within the past three decades, from the time of the first great world war—in fact from the Mesopotamian disaster, when the I.M.S., till then composed exclusively of European personnel, miserably failed, and had to admit thousands of Indian medical men to its ranks. The British Medical Council has lost its control over the medical education in India and ceased to dictate to Indian authorities, and the establishment of the Indian Medical Council has entirely changed the outlook. Several years before India attained its political independence the Indian medical profession had secured its freedom from the control of the British Medical Council and the I.M.S. There is absolutely no reason at present to continue the campaign of antagonism towards modern medicine, which is now no more 'western' and is now entirely in the hands of Indians who are in no way less patriotic than others and who can be fully trusted to do everything in the cause of the welfare and progress of India. There is therefore no reason why a small clique with pet theories and aversions should be allowed to claim all the patriotism and wisdom to shape the future of the whole medical profession in India according to their own will or whims.

Medical Standards and Registration

In the matter of medical education, the I.M.A. aims directly at the unification of all the systems of medicine, not only Indian, but Chinese etc., by absorption and incorporation of all knowledge, wherever available into the modern system of medicine, which is already international in outlook, and thus seeks to abolish all differences and obliterate the existence of separate systems. On the other hand the Chopra Report, while giving a lip sympathy to such unification and creation of a single system, has made recommendations which are contrary to this noble aim. The problems connected with the existence of a double standard of medical education in modern medicine in India *viz.*, the Graduate or University course and the Licentiate or the diploma course, are still giving trouble to medical educationists and administrators. The licentiates still continue to form the bulk of the modern medical profession and demand absolute equality with those trained in Universities. This unhealthy and undesirable rivalry, the result of the policy of the previous British Indian Government, is sought to be put an end to by means of the only possible solution—the abolition of the lower standard.

The Chopra Report if given effect to in the matter of medical education will result in the multiplication of such divisions into five or six categories or standards of education. In the scramble to appropriate all the credit in providing mass medical relief in the rural areas, the Committee has recommended as an interim policy the short term Licentiate course in Indian Medicine of three years, and a still shorter six months' course to the existing medical practitioners of Indian medicine, whether trained or untrained.

The degree course of five years will be the highest course of Indian Medicine of the future. All these courses will include varying standards of western medicine. Thus at least three categories of practitioners of Indian medicine,—Licentiates, Sub-licentiates and graduates will be brought into existence. Although the report will welcome the immediate extinction of all the existing institutions of modern medicine and their conversion into colleges and schools of their own pattern, *viz.*, of mixed medicine, it is not anticipated that they will obligingly die out so easily. These will continue to thrive for a long time to come if not for ever. On the whole, five or six classes of medical practitioners will emerge as a result of the Chopra Committee report. We have already referred to the problems arising out of having a double standard in modern medicine. The problems arising from the existence of five or six standards of medical education and as many classes of medical practitioners and the task of administering and co-ordinating the activities of these classes, will be an insuperable task for any Government in India.

There will be a diarchy in the proposed 'National Medical Board', 'with two autonomous sections on terms of equality, one the Indian Medical Council for the western medicine and the other Council of Indian Medicine, having fullest authority over laying down and maintaining standards of teaching. The latter will have two sub-sections, one for registration, discipline, etc., and the other for medical education, etc.

There will be two registers, one for Western and the other for Indian medicine, which again may be sub-divided into one for institutionally trained and the other for non-institutionally trained or untrained classes of practitioners of Indian medicine.

In this connection it may be pointed out that another class of medical practitioners is to be officially recognised, registered and encouraged by the State in this country, *viz.*, homoeopathy, claiming separate existence for itself, separate institutions, registration etc. Thus diarchy will have to give place to 'triarchy' in the near future.

The Hon'ble Health Minister to the Government of India, in her address to the medical conference at Calcutta in December 1948, stated as follows:—

"There must be no lowering of the standard of medical training in any sphere . . . I view with very great concern the policy that is being enunciated by some of our Provinces in the matter of lowering still further the standards of qualifications of your great profession . . . Cheap medicines and lower qualifications will not be cheapr even from the financial point of view. They will in the long run cause havoc to the cause of the nation's health.

There should be only one basic medical qualification for allowing people to practise the profession of modern medicine in India and the M.B.B.S. degree should be this minimum registrable qualification." (*The Hindu*, Decr. 30, 1948).

The Indian Medical Council is entrusted with the responsibility of maintaining this standard. In conforming to this standard, the Indian Medical Council refused recognition even of the M.B.B.S. degree of the Andhra and Mysore Universities for a long time, until certain improvements were made by these Universities to satisfy the standard required by the I.M.C. Sooner or later, it is expected that all licentiate courses and diplomas in modern medicine will be abolished throughout India leaving a single uniform standard of education in modern medicine.

The existence of the School of Indian Medicine and the College, with their own standards of modern medicine, is already a source of obstacle to the maintenance of a single uniform standard in modern medicine. But the Chopra report, if given effect to, will bring into existence three different standards of qualifications in modern medicine decidedly lower than the M.B.B.S.—four standards altogether. Even the highest degree course of Indian Medicine proposed, will not be up to the M.B. standard, as only what are considered 'the essentials of western medicine' or 'a working knowledge' will be included. The licentiate course of three years and the six months' course for the existing practitioners of Indian medicine, will have still lower courses of modern medicine but it is clear that all of them will be at liberty to practise modern medicine, surgery, midwifery etc., and also undertake medicolegal and public health work. The net result will be that the authority and functions of the Indian Medical Council will be completely undermined, its purpose defeated and its very existence superfluous.

The late Sir Nilratan Sircar, in his convocation address to the Andhra University on 7-9-39, warned against such retrograde measures in the following words:—

"The present tendency to register practitioners of various so-called system of medicine, lacking systematic scientific training of any sort is a move in the wrong direction.... The proper move should be to have only one medical science which has been worked out by the scientists all over the world, incorporating into it whatever good there may be in the indigenous medical sciences of the country. If India is to achieve her place among the first rank nations of the world, she must advance with the help of modern sciences and she must discourage retrograde measures of the sort that are being encouraged in some of the provinces without forethought and imagination."

In this chaotic conflict of confusing ideals and contradictory recommendations, it will be highly profitable to refer to the following well considered opinions of the Calcutta University Commission presided over by Sir M. Sadler, on the indigenous systems of India:—

"Notwithstanding the introduction of the western system of medicine the ancient indigenous systems continue to exercise considerable influence over the people at large, and large masses of the population have recourse to what is known as the Ayurvedic system among the Hindus and Unani system among the Mussalmans. It is not necessary for our present purpose to consider how far either of these systems is founded on a true scientific basis, for it is plainly desirable that systems which have in the past deeply affected the life of important communities and still exercise immense influence upon them should form the subject of historical study and scientific investigation, especially as competent scholars are likely to be available for this purpose.

"That the entire system of indigenous medicine, as practised in India, affords a fruitful field of study and investigation, is indeed clear from the testimony of many competent authorities."

After quoting the opinions of Drs. Hoernle and Neuberger, Sir Pardey Lukis and Dr. Harold Brown, the report continues:—

"No arguments are needed to establish the position that a system which is described in these terms, by some of the most distinguished exponents of the Western system of medicine should be cultivated in an Indian University from the point of view

of a historical, critical and scientific student. We do not suggest that in a University of the modern type, it would be correct to establish degrees and diplomas in ancient systems of medicine with a view to authorise the recipients to undertake the practice of their profession. But we maintain that these systems of medicine deserve careful investigation in an Indian University from the point of view already indicated. If adequate provision is made for this purpose in the reconstituted University, it is not unreasonable to hope that the exponents of the indigenous systems of medicine will gradually become linked with students trained according to the most approved western methods. The former will recognise that though their ancient system reached the height of a systematising, theorising school of thought, it lacked the freedom of individual action essential to the pursuits of real science and its evolution was permanently arrested by an unscientific veneration for petrified dogmas. The modernists, as we may call them, will on the other hand, realise that the ancient system possessed an imposing structure of empirical knowledge and technical achievement which cannot be safely ignored even in these days of rapid progress." (Calcutta University Commission Report, Vol. V. Ch. XLII, pages 55-58).

"It is clearly impossible that we should ask the University to undertake to train students on systems which ignore what has been done in science and medicine for centuries, although they have preserved valuable knowledge. As Sir Sankaran Nair, the Member for education pointed out in a speech of March 24th, 1918, at the Ayurvedic and Unani Tibbi College at Delhi, the study of modern sciences is indispensable for medicine.

"His Excellency Lord Pentland struck the same note in a speech delivered at the opening of the Ayurvedic Hospital in the Cochin State:—

"Medicine" he said, "whether it be called Ayurvedic, Unani or western, must follow the same methods and the same aims and submit to the same tests . . . any system of medicine must be correlated with every advances in the allied sciences such as chemistry and physiology."

"There is an obvious and promising desire at the present moment among the numerous adherents of these systems for closer touch with modern scientific methods. In time no doubt they will be able to make available for the practitioners of western medicine the traditional knowledge which is of real value; and will reject, as western medicine continually rejects, those theories which are mere survivals and cannot stand the test of experience. The distinction between Indian and western systems of medicine will then disappear." (Calcutta University Commission Report, Vol. V. Ch. XLIV, page 106).

If the Governments and the Universities had been guided by the above suggestions and acted on these lines, instead of by the Usman Committee, the problem of the indigenous systems would have been settled by this time and there would have been no necessity at all for any Chopra Committee, whose recommendations are not likely to lead to any solution of the problem, even if it cannot make it worse, for some decades. There would have been only two broad classes of medical practitioners, the one trained in the Universities according to a single uniform standard in modern medicine, and the other trained in indigenous system of India, in their own lines, each class working in its own sphere, with a common devotion to the welfare of the country and mutual appreciation of each other's system, thus leading to a natural blending and unification of both the systems.

The following prophetic utterances of the late Sir P. C. Ray who is described as the Founder of Scientific Research and Father of Modern Chemistry in India, than whom none can claim a better knowledge and insight into the Ayurvedic lore nor a greater love for India and things Indian, should be the guiding principle for the future of the medical education in India.

After describing in glowing terms the past glorious achievements of Ancient India in the fields of Chemistry and Medicine, he went to declare:—

"But I am afraid I am looking behind me and this has been, to a great extent, the bane which has checked the progress of the country. We must now look forward and judge where we stand in the present world which is based on scientific civilisation. Although I have referred to the Ayurveda, I should say that the policy of passing off the indigenous systems of medicine as scientific systems of medicine after putting a vencer of modern sciences like Physiology and Anatomy on them, does not seem to me to be the correct course. The policy should rather be to accept the Western scientific system of medicine as the nucleus round which the tested knowledge derived from indigenous systems of medicine may be gathered. All our knowledge should be accumulated on scientific lines.'" (Address on the Founder's day, Medical College, Calcutta, 1940).

We have tried to gather opinions and quote eloborately from as many eminent authorities as we can, to show that the Chopra Report is one-sided, and that although the report professes to lay down a scheme for the whole of the medical profession and education in future India, has conveniently and completely ignored the authoritative opinions of the highest representatives of Modern Science and Medicine as well as those of the genuine practitioners of indigenous systems of medicine.

Committees may come and Committees may go, but the march of events goes on in a continuous stream of progress, and one may rest assured that the Government of India and the provinces will do nothing which will be wasteful or detrimental to the welfare of the people of India or lower the prestige of the country among the nations of the world.

The Chopra Committee Report and After

It is computed that there are about 50,000 practitioners of modern medicine and merely 2 to 2½ lacs of Vaidyas and practitioners of indigenous systems of medicine, both trained and untrained. And out of these 2½ lacs, only about 5,000 can lay claim

to any qualification or training in any recognised or State managed institution. Among these 5,000, we do not know exactly how many are qualified in the schools of mixed medicine—in both the western and Indian systems of the type of the School of Indian Medicine. It is probably about 1500.

The Chopra Committee has brushed aside the evidence and opinions of the practitioners of modern medicine as represented by the Indian Medical Association and eminent authorities in Science and modern medicine, and also ignored the opinions of the representatives of more than 90 per cent of practitioners of indigenous systems of medicine, but has been led by the opinions of the school of mixed medicine, representing less than 1,500 out of a total of 3 lacs in the whole of the medical profession in India. This is neither Democracy nor Science.

There is evidence enough to show that this is due to a clique operating from behind and through the Chopra Committee. Even before the Report was available to the public, 'special' sessions were held at Madras, of L.I.M. Conference and All-India National Medical Conference, on 20th and 21st March 1949, in which copious extracts from the report were freely quoted in the addresses. This is an organised pre-arranged propaganda initiated by the clique, to hustle the Governments and other authorities to take immediate action on the recommendations of the report, by which this less than ½ per cent of the total number of medical practitioners in India hope to dominate the whole world of medicine and shape its future destinies. It was openly claimed, that in the case of Chopra Committee " the services of those who were qualified from the School of Indian Medicine were indented upon to advise and draft its Report." (Presidential address, 18th L.I.M. Conference 20th March, 1949).

This open admission is enough to establish the existence of this clique and to explain why the opinions of the leading scientists and medical men, both of the modern and genuine indigenous systems, have been completely set aside and the particular views of the clique have prevailed and formed the basis of the Report and the recommendations.

In the All-India Ayurvedic Congress held at Baroda on 10th April, which claimed in one of its resolutions to be the only representative of the Vaidyas in the country, the President Kaviraj Hariranjan Mazumdar knocked the bottom out of the Chopra Report, by stating that the Committee "has failed to understand the true character of the Ayurveda and that it went beyond its terms of reference, when it spoke of the synthesis of various systems of medicine, and that only after some years of sufficient encouragement, could Ayurveda achieve the synthesis, recommended by the Chopra Committee." In another resolution, the Congress claimed that all schemes of Ayurveda regeneration should be taken up only in consultation with the Ayurvedic Congress, and recommended the setting up of faculties for Ayurvedic Research by the Universities in the country.

There cannot be a more dangerous abuse of modern methods of treatment than the "immediate programme" put forward by Dr. A. Lakshmipathi in the above Congress, "for providing the village Vaidyas with certain easy, safe, and practical methods to effect some improvement in the treatment of diseases, such as intravenous administration of normal saline," explaining "how Ayurveda had recognised in principle intravenous administration, like Brimhana treatment, of supplying a fiuid that had been exceedingly drained out of the body." This scheme is in keeping with the recommendations of the Chopra Committee, of which Dr. A. Lakshmipathi is a prominent member, to give a six months' training to Vaidyas, in Public Health, Minor Surgery and Obstetrics, and authorise them to undertake medical relief in the rural areas. It is one thing that a few unqualified persons, are at present unauthorisedly and surreptitiously administering such injections etc., and it is quite a different matter for the Governments to authorise these persons to openly adopt such measures, misleading the public into the belief that they are properly trained and qualified for such work. India exists in the poverty-ridden villages, it is true, but the villagers' lives are not to be considered so cheap as to subject them to such dangers involved in the modern methods of treatment under the auspices of 'licensed quackery.'

In these days of transition in Democracy in India, there is a real danger of the authorities succumbing to any kind of mischievous sectarian agitation, and unless this is sternly checked at the very start, it will result in irremediable difficulties later on. Some of the speeches made in the recent agitation referred to, hold threats of this sort to Governments and persons and parties in power.

"There is an awakening in the country and so, no authority in power and occupying key posts, can dabble on meaningless acts without inflicting considerable damage to the prestige of the party in power." (Special Sessions All-India National Medical Conference, Madras, 20-3-49).

Therefore all Governments and other authorities should submit to such threats and concede every demand of the agitators, who are out to exploit this awakening of the country in their own interests.

The fissiparous tendencies of the Report, which if adopted, will result in 5 or 6 different classes of medical practitioners, have already been dealt with. In a conference of the Siddha Vaidya Federation held at Madras on 27-3-49, resolutions were passed demanding separate schools for 'Siddha System', one for each district, and a separate 'Siddha' Central Board of Medicine.

It has been repeatedly pointed out that the existence of the School of Indian Medicine has been detrimental to the cause of the indigenous systems, and instrumental in the closure of some of the privately managed schools of genuine indigenous medicine. That this has been all along the object of this clique, is now made clear, from the recommendation of the Report that "private institutions of indigenous systems should be put an end to and that even private endowed

institutions should cease to be teaching institutions." The result will be forcible suppression of all knowledge of genuine indigenous systems other than what the clique considers to be 'Indian Medicine" according to its own interpretations and fabricated within the precincts of the School of Indian Medicine. Can there be greater harm done to indigenous systems of medicine, for the improvement of which the School was originally started and the Chopra Committee appointed? The worst enemies of these systems could not have devised a more effective weapon for dealing a death blow to these systems.

On the other hand, the Chopra Committee has recommended the extension of the thrice condemned scheme of 'mixed medicine' for adoption throughout India. The following excerpts will throw light on the history and nature of working of the scheme in the Government School of Indian Medicine at Madras, for the past 25 years:—

"Since the school was opened in 1924, a tendency has developed to teach various subjects, on lines which are not Indian. When the school was opened in 1924, a Lecturer and an Assistant Lecturer were provided for each of the three Indian systems, the Ayurveda, the Siddha and the Unani. The training in these systems was to be supplemented by instructions in Anatomy and Physiology according to modern methods, and an additional Lecturer and an Assistant Lecturer were provided for these. Subsequently, additional instruction in modern methods was provided on the ground, that the Indian systems could not provide adequate instruction in these branches of knowledge. The consequence is that instructors with qualifications in modern medicine, now teach Surgery, Midwifery, Gynæcology, Ophthalmology, Pathology, Medical Jurisprudence, Hygiene and modern Medicine. This process has been carried so far that it is doubtful, whether the designation 'Indian Medical School', now gives a correct impression of the nature of the Institution."

"It appears to the Government that the Indian Medical School, which was set up mainly in order to teach Indian systems of Medicine, has now to a large extent, developed into an Institution, in which non-Indian systems of medicine, are taught by instructors with low qualifications. The justification for giving instruction in modern medicine, according to a standard which would be considered inadequate for the training of an L.M.P. seems to Government to require fuller examination." (Government Review on the Annual Report of the School, February 1941).

"Dissatisfaction with the work of the Indian School of Medicine, seems to be very widely shared, and Government have some strong strictures to make, in their order reviewing the report of the Principal on the work of the School for 1939-40. It may be recalled that the late Dr. Mallya drew attention by a resolution in the Madras Legislative Council to these grievances. His protest against the tendency evinced in the working of the school, to depart from the standards contemplated when the school was started, proved a cry in the wilderness. When the Congress Government were in power, there was trouble over these identical issues, which culminated in Minister Dr. T. S. S. Rajan and Principal Srinivasamurthi giving publicity to their attacks against each other. The indigenous systems have been crowded out altogether. This is undoubtedly a startling situation, which has to be considered by the Committee, which the Government have now constituted. Knowledge has no frontiers, but it is doubtful whether the attempt to yoke the medical systems of the past to the ever progressing medical science of to-day, can be successful. Until and unless a scientific synthesis of the Indian and occidental systems is evolved, no curriculum, which provides piecemeal instruction in both, side by side, can possibly lead to gratifying results. Medicine is a sphere, in which deficiency in instruction or a low standard in the qualifications of students, is bound to affect public interests." (*The Indian Express,* February 20, 1941).

"Opinion is not unanimous among the practitioners of the Indian systems themselves, about the value of the training given in the school, and about the general ability of the students that pass out of it. Some among them, accustomed to the strict orthodox methods of practice, are firmly convinced that nothing good can come out of it. The allopaths generally are of the same opinion and have no kind word to say of the achievements of the Institution. One proposition on which all are agreed is, that the school has not fulfilled the high expectations, which its founders entertained of it, and that, of recent years at any rate, its progress has by no means, been satisfactory." (*The Hindu,* October 18, 1944).

How the Governments of India and the provinces and the Universities and the Medical Councils, are going to react to the retrograde recommendations of the Committee, remains to be seen. While the aim is said to be unification, synthesis and integration of the Medical Science and profession, in actual working the Report will lead to cleavage, disruption, disintegration and chaos. Whatever steps are taken, they should not create fresh difficulties and lead to further complications. The following measures, irrespective of the recommendations of the Committee, will be free from objections:—

1. Encouragement of post-graduate studies in indigenous systems of medicine, by those already qualified fully in modern system of medicine, and who are competent to undertake the studies.

2. Researches by the above qualified post-graduates in association with Botanists, Chemists and Pharmacologists. Research units on these lines may be immediately formed wherever possible in several Universities and Colleges.

3. Institution of chairs and lectures in the Universities and Medical Colleges, on the scope and general principles of Indian systems of medicine, by competent persons who have made special studies of both the systems.

4. Encouragement and development of indigenous systems of medicine in their traditional lines, with a

view to conserve and preserve the existing practices and knowledge of the indigenous systems.

It is not by creating new classes of practitioners nor by swelling their number in any system of medicine, nor by resorting to spurious propaganda, that the interests of the system will be served, as in politics or religion. It is quality and not mere quantity that will count in Science and its progress.

Surrender of the Chopra Committee

We have mentioned the existence of a clique working from behind and dictating to the Committee in drafting the Report and the recommendations. After the Report was published, we get more and more evidence to substantiate our above statement. The Chopra Commitee, after visiting the School of Indian Medicine at Madras, seems to have surrendered to the glamour of the school and thereafter ceased to function as a Committee, the Chairman feeling helpless and abdicating his position and leaving everything in the hands of the clique. The story of the surrender is narrated in the L.I.M. Association Conference number, issued in April 1949, 'for members only.' It reads exactly, word for word, as follows:—

L.I.M.'s on Chopra Committee

Another creditable achievement to our Association is that LI.M.'s were taken to serve on the Committee of Indigenous Medicine which is popularly known as Chopra Committee in the end, though we have requested the Central Government during 16th L.I.M. Conference that was held at Cocanada to give opportunity to L.I.M.'s to serve on the Committee, but failed. Of late, after a Committee visited the School of Indian Medicine at Madras by which time the Committee could only take some evidences from some various people in Northern India and nothing was drafted and absolutely found it difficult to do so without the valuable assistance of L.I.M.'s. Col. Chopra, the Chairman of the Committee, has rightly chosen Dr. C. Dwarakanath to serve on the Committee—indeed he is appointed as the officiating. He was subsequently appointed as Secretary of the Committee rank of Deputy Assistant Director General of Health Service on a pay of Rs. 800. And later as the work to be done was still remaining and time before them was very short the Chairman has chosen Dr. V. Narayanaswami Iyer, Professor, College of Indian Medicine to assist the Committee along with Dr. C. Dwarkanath. Dr. V. Narayanaswami Iyer served on the Committee for a short period at Simla and Dr. C. Dwarakanath for nearly six months. . . ."

If the above narration of facts is true, and there is no reason to disbelieve them, the Chopra Report is nothing but the work of the underlings of the clique, and becomes completely vitiated, absolutely one-sided, thoroughly unreliable and completely null and void.

II

ANATOMY OF THE PROSTATE GLAND

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Historical

In the beginning of the 19th century, anatomists were far from clear about the structure of the prostate gland and its recognition as an independent organ was denied by most medical men until Sir Henry Thompson in the year 1883 proved it to be a separate organ.

The name 'prostate' as applied to it is supposed to have originated from the fact of its standing before or anterior to the urinary bladder and seminal vesicles in the supine position of the subject and was called a gland because of the glandular structure which forms a considerable part of its component tissues. Extensive studies of the gland were carried out by Hancock, Hogg and Kolliker. The arterial supply of the gland was studied in detail by Mr. Quan. Dr. Hansfield Jones in 1847 affirmed that pale or unstriped muscle entered into the composition of the gland. Killiker in 1848 declared that the larger part of the organ was constituted of pale muscular tissue and that the smaller portion consisted of glandular tissue. Professor Fillis of University College in 1856 declared the prostate to be essentially a muscular body as only a small portion of the prostate is glandular. He said that the propriety of calling the prostate a gland was doubtful, as the small secreting glands contained in it were but appendages of the mucous membrane which project into the muscle fibres in the same way as other glands of the urethra extend into submucous tissues. Jarjavay partly confirmed the above contention. Rudinger stated that no other viscus enclosed within itself so great a number of muscle fibres, the glandular structure being subordinate to the muscular layer.

Lobes of the prostate gland.—Joseph Griffiths pointed out in 1889 that he could not find in healthy bodies below fifty years of age any formation in the situation capable of being described as a third or 'median lobe' and that any marked characters as regards size and form must be considered as abnormal or morbid.

Morgagni also endeavoured to explain the existence of a third lobe by referring it to the pathological field. The normal histology of the prostate was carefully studied and described by Klein and Noble Smith in the Atlas of Histology.

The third lobe of the prostate gland was discovered by Sir Edward Home after five examinations of the organ by Sir Benjamin and then Mr. Brodie and he announced the results as the discovery of a 'median lobe' to the Royal Society, on February 29, 1800.

Previous to his investigations says Sir E. Home it was not known to him that any distinct portion of the prostate was situated between the vasa deferentia and the bladder. Sir Henry Thompson regarding the median lobe of the prostate pointed out the appearance of a third lobe must be regarded as abnormal or morbid, a slight development being usually attended with some signs of obstruction to micturition and the same is the view of some of the earlier workers.

Morgagni in his work 'De Sedibus at Causis Morburum', refers to it in several places as the morbid growth. He quotes several cases from Santorini, Valsalva, Thomas Bartholin and Valisneri, who declared that the enlargement was a kind of lobe from the glandular substance. He enumerated other cases mostly from Speculchretum of Bonetus, written in 1700.

Lientaud considered it to be quite natural and common to all bodies calling it "Uvula vesicae".

Sir Henry Thompson emphasized that the thicker portion lies behind the verumontanum which is penetrated by the ejaculatory ducts and is largely occupied by glandular tissue which increases in size in old age. He named it as the "median portion."

Anatomy of the Prostate Gland

In the descriptions given in the text books of Anatomy by Henle, Grey, Cunningham, Quan, Rauber-Kopsch, Testut, Braus, Buchanan, Grants, the words anterior, posterior, forwards, backwards, are used in relation to the prostate gland. But some of the present-day writers say that it would be preferable to begin with the bladder and taking the urethra as an axial line, to use the words dorsal, ventral, proximal and distal, with only such additions as median or lateral. These writers say that the text book descriptions are very confusing and lead us to think that at times the dissected body was standing erect.

The most instructive papers on the anatomical relations of the prostate are those of Tandler, Zucker Kandl, Adrion, Loeschke and Ribbert.

Tandler and Zucker-Kandl in 1911 described the dorsal surface with its grooves into which ductuli differentiatæ sink to penetrate into the colliculus.

The prostate gland is a firm partly glandular and partly muscular body, surrounding the commencement of the urethra for the first 1-1¼ inches of it between the bladder and the urogenital diaphragm. The gland is situated fully 1½ inches from the anus in front of the ampulla of rectum, and its anterior surface is ¾ inch below and behind the lower part of the symphysis pubis. It is subject to much variation in size. Geometrically, it has been called an oblate conoid or a truncated cone. In colour and shape it resembles a chestnut, *i.e.* it is conical and of a reddish brown colour. Its average measurements may be stated as follows:—

Transverse diameter at the base is 1½ inches, the vertical diameter from base to apex is 1¼ inches and the antero-posterior diameter is ¾ inch. The average weight of the organ is 4½ drachms. It occupies the same bed as the bladder and resembles the bladder in shape. It presents for examination a base, an apex, a posterior, an anterior, and two infero-lateral surfaces.

The base which is directed upwards, surrounds the urethra and for the greater part of its extent is directly continuing with the neck of the urinary bladder. Notwithstanding this, however, there is a superficial line of demarcation between the two, which takes the form of an annular groove occupied by a portion of the prostatic venous plexus. The urethra enters the base nearer its anterior than its posterior border. The ejaculatory ducts enter the base close to the upper part of the posterior or rectal surface, where there is a small transverse cleft called the prostatic fissure.

The apex, from which urethra emerges, abuts against the upper fascia of uro-genital diaphragm between the anterior borders of levatores ani. It is directed downwards and is the most dependent part of the organ.

The posterior surface is flattened from side to side and convex from above downwards. It is triangular in shape and is directed backwards and slightly downwards, and is set upon the anterior wall of rectum from which it is separated by its sheath and some loose connective tissue. This surface is accessible to manipulation on introducing the finger into the anal canal and carrying it up fully 1½ inches. Near its upper border there is a depression through which the two ejaculatory ducts enter. This depression serves to divide the posterior surface into a lower larger and an upper smaller part. The ejaculatory duct is formed by the junction of the duct of the seminal vesicles and the lower end of the vas deferens although some maintain that they open separately. The upper smaller portion which lies between the two ejaculatory ducts proximal to the colliculus and dorsal to the urethra is the median or tertiary lobe (Homes' Lobe). The lower larger portion sometimes present a shallow furrow which imperfectly separates it into the right and left lobes. These form the main mass of the gland and they meet and become continuous in front and behind the prostatic portion of the urethra which form the anterior and posterior commissures. Behind they are directly continuous with each other but in front of the urethra, they are connected by a band of fibro-muscular tissue which is devoid of glandular structure and is called the isthums.

The anterior surface or pubic surface, is convex and is so much projected as to really form an anterior rounded border which separate the lateral surfaces. It lies ¾ inch behind the lower part of the symphysis pubis from which it is separated by a portion of the prostatic venous plexus, the retropubic pad of fat and the medial puboprostatic ligaments. The anterior surface projects between the anterior borders of the levatores ani. The urethra emerges from this surface a little above and in front of the apex of the prostate.

The inferolateral surfaces are prominent and are covered by the anterior portions of the levatores ani which constitute the levator prostatæ muscle, which is however separated from the gland by a plexus of veins embedded in the connective tissue which forms the lateral part of the sheath of the organ. When an accessory pudendal artery is present, it passes over the lateral surface of the prostate and might be endangered in lateral lithotomy.

Prostatic fascia—The prostate is encased by a strong layer of pelvic fascia which is composed of concentric layers of fibrous tissue within and between which lies the prostatic venous plexus. This fascia is

continuous below with the upper fascia of the urogenital diphragm and which is anchored in front to the pubes by outermost part of the gland proper called the capsule of the prostate gland. On each side, the sheath consists of connective tissue in which are embedded the veins of the prostatic plexus. The posterior wall of the sheath has a different constitution and is non-vascular: It forms a broad, strong sheet called by surgeons, the fascia of Denonvilliers. It is easily separated from the loose rectal fascia behind it. The prostate can be exposed bloodlessly from the perineum through this fascia. In the male fœtus at the fourth month the rectovesical peritoneal pouch extends downwards to the pelvic floor, and separates the prostate from the rectum. The lower part of the recess becomes obliterated and the fused peritoneal layers form the posterior wall of the prostatic sheath. This fibrous membrane is termed the rectovesical fascia. Above it extends upwards over the posterior aspect of the seminal vesicles and the vasa deferentia and is connected to the peritoneal floor of the rectovescical pouch, and below where it becomes adherent to the prostate, it is lost in the perineal body.

The prostate is perforated by the urethra and the ejaculatory ducts and contains the prostatic utricle. The urethra lies along the junction of its anterior one-third and middle one-third. The ducts pass obliquely downwards and forwards through the posterior parts of the prostate and open into the prostatic portion of the urethra.

Lobes of the Prostate Gland.—In most of the text books only three lobes are mentioned, *viz.*, 2 lateral and one median.

Lowsley made a most detailed study of the anatomy and development of the gland and he says that it consists of five distinct lobes which he names, a median, two lateral, a posterior and an anterior.

The median lobe is embedded in elastic tissue and lies proximal to the colliculus and dorsal to the urethra between the converging ejaculatory ducts and bounded on each side by the lateral lobes, separated from them by a thick layer of muscular fibres. Its ducts open on the side of the verumontanum quite separately from those of the lateral lobes. It is liable to become hypertrophied in old age, while the posterior and lateral lobes atrophy, and may then produce an elevation uvula vesicæ in the interior of the bladder. It therefore varies greatly in size and in some cases is destitute of glandular tissue.

Here also lie the sub-trigonal and sub-cervical glands of Albarran which will be mentioned later on. A very slight degree of their enlargement causes obstruction to the flow of urine.

The median lobe normally projects into the urethra, forming an elevation called the crista uretheralis or the verumontanum. Adenomata are very common here and the line of least resistance is upwards into the urethra. The growth insinuates itself through the grip of the internal sphincter between the mucous membrane of the floor of the urethra and the internal sphincter. This muscle cannot, therefore, shut off prostatic urethra from the bladder and the urine constantly trickles down.

The posterior lobe is wedge shaped, having its upper part broader and it spreads, dorsal to the urethra, and between the lateral lobes. Its ducts open distal to the ejaculatory ducts. Quite well limited from the lateral lobes in most cases, it is in this lobe that carcinoma arises, although it plays no part in the hypertrophy of old age.

Lateral lobes.—These form the largest part of the gland and their ducts enter the urethra near the orifices of ejaculatory ducts, on the side of the verumontanum. Adenomata may occur here. When both become enlarged, they cause elongation of the urethra; but when one is hypertrophied, it causes disproportion and difficulty in urination.

Anterior lobe.—It is small and relatively unimportant. It lies in front of the urethra and contains little or no glandular tissue. Its ducts open upon the ventral wall of the urethra. Adenomata seldom, if ever, occur here (Cabot).

It is of interest that the ducts from the various lobes which open into the prostatic urethra are very numerous, as shewn by Lowsley—numbering more than fifty in most cases.

Adrion and Loeschke distinguish minute, branched para-urethral glands which open on all sides of the urethra and form a separate well-characterised mass of glands inside a thick arched layer of smooth muscle, connective tissue and elastic fibres. Adrion says that the muscle is continuous with the bladder and illustrates the extension of hypertrophic nodule through the muscle to project as a valve-like mass within the bladder, overhanging the urethral orifice.

Albarran, however, regards such masses as derived from the median lobe and intimately related with the sphincter of the bladder. In his excellent paper with Motz, he carefully distinguishes these glands from the median lobe.

There is recognised also as midlobe, a group of glands separate from the lateral lobes, which together with the dorsal suburethral accessory glands give rise to the prostatic hypertrophy which never involves the other lobes, although carcinomata may arise from posterior urethral surface (the median, dorsal and distal portions).

Lowsley also describes the short paraurethral glands distributed along the urethra and opening at many points, the subcervical urethral glands of Albarran and certain trigonal glands. Lowsley and others have observed that a definite capsule divides the whole of the posterior lobe tubules from the rest of the glands. This is not altogether true, for it is only the upper part which is so defined. The part below is bulbous or rounded but is not confined to the posterior region of the urethra, for it forms a considerable part of the lateral lobes of the gland as well, and it is in this latter situation that it comes in contact with the lateral tubules above. The parent tubules of this lobe have a bilateral and symmetrical origin close to the middle line and below the verumontanum.

The subsequent direction of the subsidiary branches is upwards, behind the ejaculatory ducts and lateral region, posteriorly and laterally, and downwards and laterally towards the base of the lobe. This is its lower pole, which is slightly separated from the posterior wall of the urethra. The lower part of the lobe is therefore roughly semilunar in shape. Its inferior border is rounded and thicker than the superior, from the central part of which latter a broad, wedge-shaped lamella or leaf of tissue extends upwards behind the ejaculatory ducts. The superior border on either side of the origin of this lamella communicates with the lateral tubules.

The average number of tubules composing the middle lobe is ten, in each lateral lobe there are sixteen and in the posterior lobe are nine.

The anterior lobe is the least conspicuous in the prostate of a new born child but after birth this particular group of tubules never number more than seven. In the adult prostate the anterior lobe has in most cases disappeared, whilst the remaining lobes, which earlier were more widely separated from each other, become, with one exception, more closely approximated, according to Lowsley.

The exception is the posterior lobe which remains aloof from the beginning. The mature ducts are tortuous when the bladder is almost or entirely empty, or again when the ducts are infected. When the bladder is full, they are elongated and straightened out. They enter the prostate below and behind the internal sphincter of the bladder, one on each side of the middle line and are slightly separated from each other at their entry. Their course is downwards and forwards at an angle of 35° to 40° with the line of urethra, and their distal ends incline rather sharply forwards before entering the lumen. The angle is greater when the blader is empty and less than when it is full.

Structure of the Prostate Gland

It is a modified portion of the urethral wall. In composition it is ½ glandular, ¼ involuntary muscle and ¼ fibrous tissue.

Capsule, the prostate is enveloped by a thin firm capsule distinct from its fascial sheath derived from the pelvic fascia and is structurally continuous with the stroma of the gland, being composed of the same tissue, *viz.,* non-striped muscle and fibrous tissue. Cabot and others deny the existence of the prostatic capsule.

The muscular tissue, it constitutes the proper stroma of the gland the connective tissue being very scanty and merely forming between the muscular fibres the trabeculæ, in which vessels and nerves of the gland ramify.

The muscular tissue is arranged as follows:—

1. A dense layer immediately beneath the capsule which forms an investing sheath of the gland.

2. A dense layer of circular fibres around the prostatic urethra which is continuous above with the internal layer of the muscular coat of the urinary bladder and blends with the fibres of the membranous urethrae muscle below.

3. Between the above two layers, strong bands of muscular tissue decussate freely and form meshes in which glandular structures of the organ are embedded. In that part of the gland situated in front of the urethra the muscular tissue is especially dense and here there is no glandular tissue, while in that part behind the urethra, the muscular tissue presents a wide-meshed structure which is most dense at the base of the gland *i.e.* near the bladder and becomes loose and more spongy towards the apex.

The trigonal muscle of the urinary bladder develops in the embryo from the lower ends of the Wolffian ducts and the urethra, as shown by Wesson. The main bundle of this muscle runs from the ureteral orifice to the vesical orifice, where the bundles from the two sides join and run down just beneath the urethral mucosa on the posterior aspect to and beyond the verumontanum. (This shear of muscle is called tongue depressor of the bladder).

The mass of muscles passing over the posterior edge of the vesical orifice forms Lietauds' uvula. Here at the orifice the division of the detrusor muscle into layers is distinct. From each of the two layers just posterior and lateral to the vesical orifice is sent a strong band of muscle fibres which run downwards and forwards into the prostatic mass to form a loop around that part of the urethra. The bundles from the external longitudinal layer is thicker and external, while that from internal circular layer is thinner and passes inside the external, and these two arcuate muscle bands form the internal sphincter. They distinctly are not circular sphincters like the sphincter ani.

The striated muscle of the urethra begins as a sheet on the anterior surface of the prostate but does not surround the urethra above the level of the apex of the prostate and covers the entire membranous urethra and thickens to form the external sphincter, the fibres of which are continued upwards (Henles Muscle), on the anterior surtace of the prostate.

There is described an external sphincter of the urethra composed of both striated and non-striated muscles fibres. It is formed by two bands from the posterior longitudinal layer of the bladder which blend with the more distally placed striated muscle fibres and encircle the proximal part of the urethra. Wasson and others have contributed much information on the distribution of the striated muscles.

The glandular substance.—The glands are arranged in three concentric groups.

(1) The innnermost or mucosal glands are short and simple.

They open all round above the level of the colliculus. All hypertrophies of the prostate arise from these mucosal or suburethral glands. (Young).

(2) Intermediate or submucosal glands, they open into the prostatic sinus at the level of the colliculus.

(3) The outermost or prostatic glands proper are long and branching. They envelop the other groups except in front, where those of the opposite side are joined by the non-glandular isthmus. The ducts open into the prostatic sinus.

The glands are composed of follicles which consist of alveoli or acini, the walls of which are formed by a basement membrane covered internally by columnar epithelium. The tubular alveoli lead to the elongated canal lined by the same type of epithelium which join to form 12 to 30 small excretory ducts. They are connected together by areolar tissue supported by prolongations of the fibrous capsules and muscular stroma and enclosed in a delicate capillary plexus. The prostatic ducts open into the floor of the prostatic urethra and are lined by two layers of epithelium, the inner consisting of columnar and an outer of small cubical cells. Small colloid masses known as the amyloid bodies are often found in the gland tubules.

Blood supply.—The arteries are derived from internal pudendal, inferior vesical, middle rectal and intrapelvic portion of the inferior gluteal. The veins open into the internal iliac vein.

Lympatic Drainage.—Lymphatic plexuses drain into external iliac and common iliac glands.

Nerve supply.—Nerve supply comes from the tenth thoracic segment to the third sacral segment.

Parasympathetic supply comes from the second, third and fourth sacral segments and the sympathetic supply comes from the lower thoracic and upper lumbar segments from the intermediolateral column.

The prostate is richly supplied by nerves and contains ganglionic nodes, ganglionic cells and numerous end organs. It is a well known fact clinically that pathological conditions of the prostate are accompanied by very severe nervous disturbances, the most common being referred pain in the small of the back, in or about the rectum and down the legs.

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III

RURAL MEDICAL RELIEF IN BOMBAY PROVINCE AND THE MEDICAL PROFESSION

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The British Government in India had started a few dispensaries in rural areas of the province. There was neither a plan nor any system. The question of population or density of population per square mile of an area was not taken into consideration. It was therefore natural that the needs of the rural population were not considered, and whatever relief was given did not touch the fringe of the population and did no good. Sickness, morbidity and mortality continued to be high.

When the popular opinion began to exert some influence the Government started a *Subsidized Medical Practitioners Scheme.* Under this scheme a medical practitioner entered into a contract with the Government to start a dispensary at a village and Government paid him Rs. 50 per month as a subsidy for seven years and Rs. 250 annual grant for drugs. He was allowed private practice. After seven years the subsidity was discontinued. The practitioner was expected to have developed sufficient private practice to maintain himself. The scheme did not attract many practitioners as in many villages there was no private practice and after even seven years it was difficult for him to make both ends meet. Further, there was no chance under the scheme to shift to a bigger place in future.

When the clamour of the leaders of the people became louder demanding better medical relief to the rural population a third scheme was introduced by the then Government. It was *the Cottage Hospital Scheme.* Under this scheme certain village dispensaries were to be converted into small hospitals, suitable enough for all types of medical work. They were to be placed under experienced medical men. Two or three dispensaries were converted into cottage hospitals, but these hospitals were mostly situated in small towns rather than villages. Even in this there was no plan. If such cottage hospitals were started at places around which there were a few dispensaries within easy reach, the cottage hospitals would have served very usefully. It was not so.

By the time Government started the Subsidized Medical Practitioners Scheme the regular dispensaries were handed over to the District Local Boards. Most of the Local Boards had very small finances and the dispensaries under their charge deteriorated very much. It would be a painful surprise to learn that some Local Boards paid Rs. 40/- per month to the Licentiate doctors. With this remuneration it was difficult to understand the policy of the Government and the Local Boards in the matter of giving medical relief to the rural population. Inefficiency, corruption and callousness in the medical relief were the natural results thereof.

In 1938 when the popular Government took over the charge of the administration, the Minister of Health started the Unani and Ayurvedic Colleges and recognised all Ayurvedic and Unani and those practising any type of medicine at the time by registering them. Those who passed out from these Ayurvedic colleges were taken up on the Subsidised Medical Practitioners Scheme on smaller remuneration than that of the licentiates. Except a few all these were most inferior types of medical men.

When the British Government retired on the 15th August 1947 there were in Bombay Province—461 hospitals and dispensaries either under the Local Boards or Government, 333 subsidized medical practitioners and 5 cottage hospitals.

Since our popular Ministry took over the administration of the Province and a medical man was selected as the Minister of Public Health, the people

and the medical profession heaved a sigh of relief and hoped to have scientific Public Health and Medical Relief Schemes for the rural population. It has so far seen very little of them.

Unfortunately there does not seem any sincere efforts on the part of the popular Minister to put the preventive and curative medical service in rural areas on a sound and scientific bases. The popular government is also following the old unscientific system. The result is that the medical relief extensions made by the Minister of Health is a mere eyewash, for the crying need of the rural population. So far there is hardly any addition worth the name.

Let us analyse what is being done so far.

(*a*) Extra grant was given to the dispensaries handed over to the Local Boards. These Local Boards having small finances there have been no increase in the number of dispensaries. They have also adopted the Subsidised Medical Practitioners Scheme. Some of the Local Boards are ready to hand over the medical relief work to the Government if the Government would take it over. The Government is not starting any more dispensaries.

(*b*) It is announced that the Government has increased the Subsidised Medical Practitioners posts to 500 and raised their subsidy to Rs. 150/- per month for the Licentiate and Rs. 125/- per month for the Ayurvedic and Unani medical practitioners with some allowance and grants for drugs. These terms remain unattractive to the men of modern medicine. A larger number from the cadre of Ayurveds and Unanis had, therefore, to be called out. Even the latter are not coming forward in sufficient number to take up these posts. A good number of them are still vacant.

(*c*) When the Government failed to attract a sufficient number to this scheme, some one got a brain wave and suggested a *Village Aid Scheme*. The Government have approved of this and has started implementing the same. Under this scheme 400 to 500 primary school teachers are provided with first aid equipment, a medicine chest and a small course in the use of medicine. This scheme has been put into force for some years now.

(*d*) Even this scheme seems to have failed as it should, it being unscientific. A third scheme has evolved which is called *Subdispensers Scheme*. According to this scheme social workers will be given an allowance of Rs. 10/- per month and a medicine chest. They would go to the village for their social work and do the medical treatment as well.

(*e*) A fourth scheme in their plan is to start a *mobile medical and surgical unit*. The Minister seems to be very enthusiastic about this. A mobile medico-surgical unit on motor vehicles will go to a village area equipped with medical, surgical and ophthalmic personel, stay there for three weeks, perform operations and do other medical work. At the end of three weeks it will move on to another area. Such mobile units served usefully on the war fronts. As a peace time civil measure one would not think it is really good. Arrangements for proper nursing and post-operative treatment have to be made which will require a regular hospital, and staff. Experience will prove what value should be attached to this scheme.

(*f*) Only one cottage hospital appears to have been added to the list existing before they took over the charge.

The necessity of introducing increasingly inferior types of medical relief schemes only indicates that the popular Government is at its wit's end in the matter of medical relief. One has not yet heard of any definite plan prepared by the Government to build a really good medical relief structure for the province. What is being done is not merely patch work on the old plan but has evolved more and more unscientific schemes. One wonders what value the Government has placed on the life of the rural population that such schemes as the Village Aid Schemes and Subdispenser's Scheme can be declared good for them.

Whenever the question of medical relief is touched or discussed either from the public platform, legislative assemblies or social functions, the Government put forward the following reasons for the failure to implement the promises given by them in the matter of medical relief to the rural population:—(1) Shortage of medical personelle. (2) Stringency of finances. (3) Failure of medical profession to live upto their traditions. (4) Unwillingness of the medical profession to go to the villages. (5) Shortage of nurses and midwives.

I will not touch the first two points as they are mainly concerned with the Government. If the Government has a desire money can be always found and ways and means adopted to increase the men of modern medicine. If the Government set apart 15 per cent of their revenue as urged by the All-India Medical Conference at its last session in Bombay, a great deal can be achieved.

I would like to deal with allegations made against the profession. The medical profession by a great majority has lived upto their noble tradition of service to the sick. Whenever a call was made on the profession for any emergency it has always responded. It has been rendering honorary service to the various city hospitals. A large number of young men are waiting to give their services if the Government would create opportunities for them by extending the district hospitals and making provision for honorary or part-time appointments.

Have those who make the allegation that the medical men and women do not go to villages ever given a thought to find out the reasons for this attitude? It is not that they want to enjoy the luxuries or the amenities of the cities. Quite a large number of doctors in the cities live in single or double room tenements, drudge from seven o'clock in the morning till as late as ten o'clock at night to eke out their living. They see no bright side of the city nor enjoy the pleasures of club life, gaities or social contact. I am sure the Minister of Health is well acquainted with the life of a medical man in the cities of Bombay Province. I am sure he will agree with me that life is not one of ease and pleasure. It is a life which would make one in any other profession or service sick of it.

Inspite of this why do they not migrate to small places and take up services in the villages?

There must be some substantial reasons for voluntarily accepting a life of such hardships in a city, rather than one of dignity, respect and ease in a village. The Government seems to be indifferent to go into this question nor is it in a mood to hear the truth from the profession.

Some of the reasons why medical men and women do not go to the villages are as follows:—

(*i*) They have reached a certain standard of life and culture which they wish not to deteriorate.

(*ii*) They have their duty towards their children and their education.

(*iii*) Their remuneration is not adequate to maintain themselves, educate their children and meet some of the social obligations.

(*iv*) There are no facilities provided to keep their knowledge upto date.

Let the Government and responsible people give a thought to this problem and try to solve them. I am sure the medical profession will be willing to go to the villages if the Government creates suitable atmosphere and conditions.

What is really necessary is that the Government should prepare a complete plan for the preventive and curative medical relief for the province with maps and charts. Then start implementing it from the foundation. If the existing facilities fit into the plan, they should be brought upto the required standard. Those that did not, should be either scrapped or shifted to fit into the plan.

Those unscientific schemes evolved by the Government are a disgrace to the good name of the popular Government, and to the illustrious Minister of Health of Bombay.

The shortage of nurses and midwives also requires to be properly tackled by the Government. If the Government make facilities to train nurses and midwives in all district hospitals and enlist the support of social and women's organisations the number of nurses and midwives are likely to be increased, and they will be available to the districts. They are less likely to migrate to the cities. I would commend the government to study the scheme prepared by Dr. Dasgupta and myself on the subject for the Kasturba Trust.

No measure of medical relief can have any value unless preventive measures are simultaneously taken. The public health problems seem to be in abeyance. Except some efforts in the Malaria prevention adopted in certain parts of the province, there seem no other measures in progress. We have yet to get the figures of malaria incidence from those parts since after the measures were adopted. A regular plan is very badly required to be placed before the public and the medical profession.

The medical profession through its organisation had offered its services and co-operation both to the Minister in charge of the Rural Reconstruction Board and to the Minister of Health. They were not prepared to accept the offer sincerely made. The Indian Medical Association is still at the services of the popular Government and the people. Of all persons in the country, the members of the medical profession have the privilege of reaching the heart and hearth of the people and knowing them closely. Provinces like U.P., Madras, and newly formed East Punjab formed Medical Advisory Committees on which representatives of the I.M.A. have been invited to serve. These Governments have not regretted for this. On the contrary the co-operation has proved beneficial. It is hoped the Bombay Government will follow the lead given by those provinces.

IV

RURAL MEDICAL RELIEF

N. C. DAS GUPTA, M.B.,
Khulna

The problem of rural medical relief in India has received the attention it deserves from both medical and political leaders. About 90 per cent of the 40 crores of India's population live in villages to cater to whose needs there is scarcely any qualified doctor. Most of the estimated strength of 40,000 doctors who look after the health of their countrymen live in towns. So it is unfair to say that there are at present one doctor for every 10,000 of India's population. Bhore Committee in their long term programme recommended one unit of six doctors for very 10,000 to 20,000. According to their plan this ratio can be reached only after 40 years. Even Soviet Russia by her planning could increase the strength of her doctors from 25,000 to 1,20,000 in 23 years (1917-40). Bhore Committee's short term programme gives one unit to 40,000 during the first 10 years. It may pertinently be asked how should the need be met in the interim period. Of course by gradual process the requirement will be gradually met, but efforts must be made to improve the present deplorable condition as far as possible.

At present the rural population is served by several kinds of quacks, Allopathic, Homœopathic, Ayurvedic, etc. From long experience of rural practice I can say that the least dangerous of these are the Allopathic quacks. All of them are equally ignorant and every one is prompt in giving assurance that he would be able to cure the disease, but the most successful is the Allopath. The reason is not difficult to find. The commoner diseases of our country are malaria, kala-azar typhoid, dysentery, cholera, pneumonia and tuberculosis. Except T.B. and typhoid the others have specific remedies which are well known to the Allopathic quacks. Most of these diseases can be easily diagnosed or at least suspected even by laymen at a fairly early stage. The Allopathic quacks have this to their advantage that most of them spent a few years with some qualified doctors before they started independent practice and thus gained some experience in bed-side diagnosis even without the aid

of scientific examination. The difficult cases are equally difficult to all quacks. So if by their error of judgment and dogmatism considerable harm is done it is least done by Allopathic quacks. Hence there is little doubt that they give a lot of service to the people. Quackery in this country is a necessary evil and not an undiluted evil even, and it must be endured until the country can produce the requisite number of qualified doctors. It is, therefore, no use denouncing it and trying to abolish it by legislation. The remedy will be worse than the disease.

The class which comprises the Allopathic quacks is fairly intelligent though a little clever too. It is to be considered how best this class can be utilised. I have had opportunity of coming in close contact with many of them and study them. Most of them like ourselves want to give a bit of service to humanity while making their living out of the profession. They are eager with their meagre education to learn more. Though it is absurd to think of giving them even a little training on scientific line it is not very difficult to make them less dangerous and a little more useful to society.

Some years back the District Boards of Bengal had a scheme by which they used to give training in maternity to country *dais* through local qualified doctors. I had an opportunity of giving a few courses to some such *dais*. I must say that these women were of much inferior stuff than the quacks coming as they did from the lowest strata of society. Still those who happened to have some intelligence and who practised generally amongst the midle class people, having by association developed a little polish, made considerable improvement. They became cleaner and grew a sense of responsibility which made them seek medical assistance in case of real need. Lack of this sense is responsible for not a little harm even where qualified medical help is available.

It cannot be denied that diagnosis of commoner diseases can often be fairly accurately made from history, visible signs and symptoms and therapeutic tests. Of course there are cases which give trouble, but they do so even to experienced qualified doctors. Prognosis too can generally be made from outward signs and symptoms. So if the quacks are given a short training with demonstrations they can be made to handle cases with better judgment and with more sense of responsibility. Medical ethics as well as self interest of the qualified doctors stand in the way of understanding these quacks. If a more liberal view of ethics be taken and if the qualified doctors instead of treating these quacks as their competitors become a little co-operative with them immense good can be done to the teeming sufferers in the interim period. Quackery thrives on poverty, ignorance and last but not the least on dearth of skilled stuff. So long as these exist no legislation can remove quackery. So it is wiser to utilise the material available. It would be just like building thatched houses for refugees pending construction of concrete ones.

V

REPORT OF A TOUR IN EUROPE AND FEW OBSERVATIONS ON INDIAN MEDICAL PROBLEMS

N. P. TRIPATHI, M.B.B.S.
Patna.

Before I started for my continental tour I had the pleasure of meeting and discussing the various medico-social and medico-political problem facing our country with a large number of important and influential persons in India.

Mahatma Gandhi gave his blessings and wished me happy journey and safe return with something fresh to suggest for the benefit of the millions of poor and starving people of India.

The Hon'ble Pandit Jawaharlal Nehru, gave all assurances for help and co-operation.

Dr. Rajendra Prasad, Hon'ble Mr. Jagjiwan Ram, Hon'ble Rajkumari Amrit Kaur and Dr. Jiwaraj Mehta gave personal letters to Mr. Krishna Menon, High Commissioner for India in London, the then Indian Ambassador in U. S. S. Russia. Sreemati Vijaya Laxmi Pandit and His Excellency Mr. Asaf Ali and Mr. Bajpai, India Trade Commissioner in France.

Mr. W. Marlow of the High Commissioner for India Office, in London took all necessary and prompt steps for my visits in the absence of Mr. Krishna Menon from London.

I was introduced to Sir Weldon Dalrymple-Champneys, BT., D.M., F.R.C.P., Deputy Chief Medical Officer and Dr. Conor J. Domlan, Senior Medical Officer of the Ministry of Health, White Hall, London, who very kindly arranged for me visits to various institutions and discussions with important persons and officers on various medical problem facing their countries and how they were tackled.

Mention may be made of a few important ones among the institutions I visited and persons interviewed:

1. Visited British Post-Graduate Medical School Hammersmith and met Dr. Newman, the Dean of the Post-Graduate Medical School.
2. Visited Hammersmith Medical School Hospital and met Dr. H. G. Wembush, Superintendent.
3. Met Dr. Dorothy M. Taylor, M.D., Senior Medical Officer, Maternity and Child Welfare, Minister of Health, London, and discussed the general plan of work regarding maternity and child welfare.
4. Met Dr. H. Joubs, Medical Superintendent of the Central Middlesex Hospital, Park Royal.
5. Visited Westminister Hospital and Medical School and the Nurses' Home and discussed with Mr. Power, the Secretary and the House Governor.
6. Visited St. Pancras Borough Council Tuberculosis Dispensary, Camden Road and met Dr. Back, Tuberculosis Officer and saw the session in progress and discussed tuberculosis problems.
7. Met Dr. A. P. Ford, the Chief Tuberculosis Officer, Hertfordshire County Council, discussed the organisational work and saw the ware Sanatorium—saw the fine arrangements for recreation of the patients and radio set arrangements with separate earpiece.

8. Met Dr. Norman Smith, Minister of Health, White Hall, London, and discussed on tuberculosis organisation.

9. Visited Queen Charlotte's Maternity Hospital, Goldhawk Road, met Mr. Macree, the Resident Obstetrical Officer, saw the hospital and discussed organisational work. Met Miss A. C. Lees, chief of the almoner and discussed the socio-medical work done by the almoners and the working of the Institute of Almoners.

10. Visited the British Medical Association Building, Tavistock Square and met Dr. Reveus, the Secretary, discussed the general outline of the work of the Association and went round the big and spacious meeting hall and the library of the Association.

11. Visited Hospital for Sick Children, Great Osmond Street and met Dr. Baynon, Resident Physician and discussed the general plan of work.

12. Visited the Chelmsford, Essex County Maternity and Child Welfare Services and interviewed with Dr. J. L. Willer Wood, County Medical Officer of Health at County Hall, Chelmsford, who took us round about 40 to 50 miles inside village—discussed with other members of his staff and supplemented by further visits.

13. Met Sir Andrews Davidson, Chief Medical Officer, Department of Health for Scotland, Edinburgh, who discussed at length the problems of health of Scotland. He pointed out that in few islands under the Ministry of Health of Scotland medical aid could not be given before 24 hours had elapsed and lights were used to indicate that a doctor's help was required in a particular island.

14. Met Dr. Charlottes A. Dauglas, M.D., D.P.H., M.C.O.G., Medical Officer, Maternity and Child Welfare of the Department of Health for Scotland, discussed the various problems.

Dr. Seymour was kind enough to supply important file regarding health visitors and maternity services of Scotland for references and study.

15. Dr. G. R. Walker, Secretary of the British Medical Association, Scottish Office, Edinburgh—and discussed about the nursing and saw the Scottish Branch of the B. M. A. building and library.

A few of the important medical institutions were visited in Edinburgh and Glasgow.

Met Dr. A. T. Elder, Deputy Chief Medical Officer, Ministry of Health and Local Government for Northern Ireland—Stormount, Belfast, who discussed at length the various medico-social problems of his country and how they were tackled. A few of the visits were arranged to the local institutions and hospitals.

The High Commissioner for Irish Free State in London was very kind to ararnge for visits in Irish Free State with the Ministry of Health of Dublin.

Dr. J. S. Deeny, M.O., M.SC., F.R.C.P.I., D.P.H., Chief Medical Adviser, Ministry of Health, Ireland, was very kind in taking me round the different important places and institutions and hospitals in Dublin and outside Dublin. He himself drove about 500 miles away from Dublin and showed around the different types of hospitals and institutions.

Dr. J. I. O'Reilly, F.R.C.S., who was introduced to us at County Hospital, Tullamore, Ireland, took lively interest in the affairs of India.

Sister M. Commillus of Tullamore took great interest in the Indian women and acquainted me with true pictures about the customs and practices among the women of the Irish Free State.

The Hospital at Mulingor in Ireland was really very fine. Dr. Deeny, a peculiar energetic young man discussed at length the social, religious customs of India and gave a vivid picture of the medical and health policy followed in Irish State.

While in France (Paris) I received the alarming news in local papers and radio of the serious condition of the health of Mahatma Gandhi as a result of his last fast in Delhi and it engaged my immediate attention.

The delay in receiving reply of the urgent telegrams sent to India Government by the India Office in London regarding my Passport to Germany and U.S.S.R., difficulties in obtaining permits for sufficient exchange for the sterling and dollar areas were already disturbing my brain till the sickness of my wife (Mrs. Kalawati Tripathi, M.A.), who accompanied me throughout my journey combined with the fears of grave happening in my country as a result of Mahatma's fast precipitated my decision to return to my country and therefore I was compelled to cancel my programme for further tour to other countries.

We hastened back home in plane to hear on the very next day the short shocking news of the death of the Father of Indian Nation, a great preacher of non-violence not a result of fast but by assassination.

Before I conclude my observations, in the light of the comparative study and the informations gathered in my tour I beg apology of the members of my profession in not being able to completely fulfil the mission which was assigned to me by them for reasons and circumstances which were beyond human control and on behalf of the members of the Indian medical profession in Bihar I express my sense of gratitude and thankfulness to the Ministries of the Health of the United Kingdom, Irish Free State and France for the hospitality, facilities given to me and my wife, during our tour in their respective countries.

I also thank from the core of my heart for the various acts of personal favour and official support and guidance given to me by the illustrious sons and daughters of my own country before I started for tour.

I thank whole-heartedly Capt. P. B. Mukherjee, the then President of the Indian Medical Association, and Dr. K. S. Ray, the Editor of the Journal of the Indian Medical Association whose help and guidance for the tour can never be forgotten. I thank the members of the 7th, Bihar Provincial Medical Conference who very kindly elected me as their representative to tour the different countries on their behalf.

Medical Treatment

In the scientifically advanced countries in the world the general tendency appears to be towards basing the National Health Plan on a system of social insurance and for a country like India it is desirable that medical services should be available to all people alike and no individual should fail to secure adequate medical care because of inability to pay for it.

In order that the health of the nation may be fully protected and all members may enjoy full health and happiness, the first requisite is the provision for nutritious and well-balanced diet, the second in importance is the availability of a healthy environment with suitable house to live in and the third is the supply of proper clothing for protection against exposures to extremes of temperature.

In conformity with the principles of the socialist systems of Government, the life and the prosperity of an individual absolutely belong to the State and it is the duty of the State to make proper provisions for the nation. It follows therefore that the protection against diseases and free supply of medical help becomes a part of their political objectives but in a country like India where uptil now provision for food, housing and clothing is the responsibility not of State but of the members of the nation which does not stand to reason how free medical treatment can be so conducive and beneficial to the individual members, for the simple reason that unless and until the first three requisites namely, food, house and clothing for the healthy life of the community are present. Diagnosis however perfect, expert advise however sound and medicines however potent cannot achieve success in giving permanent relief to the suffering poor humanity.

Therefore it seems reasonable that to make provision for free medical treatment for the members of the community, who can afford to manage efficiently for their proper food, good house and decent clothing, is unnecessary and undesirable and unjustified.

To make open the door and free medical treatment to those who can very well afford to pay for it is to give them facility at the expense of the poor who really need the help and without which their lives are at stake.

Even if the medical treatment is made free to all poor people it canont make them permanently healthy and therefore the State must take early steps to make provision for the free supply of food, house and clothing and then alone the system of free medical treatment will be able to do so much good as is expected, for the simple reason that the real backgrounds for ill-health is primarily want of food, clothing, though other facts also come in secondarily. So long the socio-economic and political conditions as existing in India to-day, are not fundamentally revolutionised and totally changed those people who can afford to pay must be given the benefit of the medical advice only on payment of fees proportionate to their family income, which can be easily assessed from the index card of family income to be provided by the State.

This type of assessment of means and neeed of patient is generally done in other countries by what is known as an Almoner. In most of the cases she is a lady. She has to see that medical charity provided by the hospital was given only to those, who really needed it and assist patients who were too poor to carry out the treatment recommended by putting them in touch with voluntary and State agencies able to help them and also to discover the background of the patients' illness co-operating in treatment and guiding the patients through rehabilitation back to normal life and work.

Such medico-social workers can be trained as are done in the Institute of Hospital Almoners in London.

What India requires to-day is not medicine but food more than anything else and in order to save so many starving millions, provision of food, even to keep body and soul together, is the need of the hour. To-day this should engage serious attention of the Government and the people alike. I am sure the members of the medical profession will never lack behind in giving their quota to the benefit of the nation.

Maternity and Child Welfare

The foundation of the Nation are the infants and mothers and a country which wants to exist in the present era of struggle for existence and survival of the fittest must protect the life of the mothers and infants at all costs. In all the advanced and prosperous countries in the world all possible steps are being taken by the State to protect the interests and lives of the mothers and children and systematic well-planned schemes are in vogue to take care of them from the time of her conception till the child is able to stand on its own legs in the form of ante-natal, intra-natal, post-natal cares and then the after-care of the mother and the child sufficient centres for maternity and child welfare are opened and controlled efficiently and day nurseries, residential nurseries and homes for the helpless illegitimate children and for the unmarried mothers are run.

The entire management of the protection of the mother and the children is directly controlled by the State. But let us examine the conditions of the mother and children in India. In India nearly half of the total deaths are among children under ten years of age and half of these deaths are among children within the first year of their lives. Thus out of about sixty-two lakhs of average annual deaths in

British India '1932-41' approximately 31 lakhs of children die whose age is within ten years of which fifteen and half lakhs are within one year. According to one report one infant is dying every fifteen minutes in India due to tetanus alone.

Similarly maternal mortality is estimated to be annually about two lakhs and about four million are suffering from varying degrees of disabilities as a result of child bearing. This alarming state of affairs is undermining the very foundation of our nation.

Want of education, malnutrition and insufficient arrangement of maternity service are responsible for the above deaths and should engage the serious attention of the Government and the public alike and early and immediate steps must be taken to eradicate the evil.

Medical Swaraj

Since 15th August, 1947, we have been enjoying the freedom of a free nation and no doubt we are politically free. But are we really free so far our medical treatment is concerned? Have we sufficient machinery for the manufacture of various drugs, factories for the various surgical apparatus and heavy chemicals and sufficiently equipped laboratories for the supply of biological and synthetic products which we badly require for the efficient management of our hospital and the patients? Have we any medical institution of all-India concern which can impart the highest type of education in all the various branches of medicine and to bring efficient medical schools to guide the medical destiny of our Nation? Are the medical, dental, nursing and pharmaceutical professions under proper uniform standard of regulation? Establishment of All-India Medical Institute at a central place, the establishment of factories well-equipped laboratories for manufacture of essential medical products, is a crying need of the hour. The revolution of the medical, dental, nursing and pharmaceutical professions passing to suitable laws to remove quackery from our land is the imperative need of the day.

Indian Medical Association

In all democratic countries every member has his order of quota of service to render for the benefit of the nation and in order to be able to render that service medical men have further service to render apart from his or her duty from being an ordinary citizen. He or she has to render service in ameliorating the suffering humanity and also to advise as to how the health of a nation can be protected combined with its preventible and curative methods.

In order to maintain a uniform standard of a consolidated nature one has to work through an Association and Indian Medical Association is the only organisation in India, which can solidly talk of the medical profession and hence it is necessary that each and every member holding registrable qualification must become members of the Indian Medical Association.

In order to speak solidly for the entire medical profession the Indian Medical Association must be well-organised and hence all the medical men whether a graduate or licentiate must come under the common banner of Indian Medical Association.

It will then and then only that we can work solidly together and guide the medical policy of our country.

Can there be any power on earth which can have the audacity of ignoring the legitimate demands of the members of the profession whether it be for the benefit of the profession or the nation?

When I was going round the huge building of the British Medical Association in London and Edinburgh I was always thinking of the absence of a building of ours, where we must have sufficient place for holding periodical meetings and accommodating a good library.

The provincial branches should also have buildings of their own to consolidate their work.

Apart from doing organisational works the medical association should have arrangements for periodical popular lectures for the general public to awaken the mass health consciousness among the nation and carry on health propaganda by means of cinema shows, and pamphlets better written and published in the language of the province.

In every country there is an army for protection against invasion and that army is maintained throughout whether there is war or not for times of emergency and reinforced when war breaks out but in a country like India when war diseases have ceaselessly broken out in one part of the country or the other, an army of medical men with all the necessaries, assistants and requisites must be kept in readiness to fight the various diseases and sent to check the spread whenever and whenever exigency would arise.

Medical Militia

The defence of the health of a nation is as important as the defence of the country because the very purpose of the defence of a country is frustrated if most of the members would die out due to epidemics inside its borders.

The recruits for war can be trained quickly, have to work under proper command but the recruits for medical profession cannot be trained so quickly and each member has to work independently according to his or her own experience and discretion. The organised army of soldiers have to work at one strategic place under the guidance of its expert commander but the army of medical men have to work in the remotest corner of a village where no further advice of any other medical man is available.

In case of modern warfare the art of destruction has achieved its zenith in the application of the atomic

energy and even scorch earth policy is advocated by some but the medical profession has to fight out against destruction and death whether it is a result of epidemic outbreak of diseases or caused by destructive forces of an army in action and the scientific knowledge in medicine and surgery has to be applied in accordance with the requirements of the individual case which are varied and numerous.

In the case of administration of justice in the court of law a case is judged by the presiding officer with the help of learned counsels which is done in a calm atmosphere assisted by references to law books, can be corrected in a higher court but in case of administration of medicine in a critical case for example in a jungle or an isolated place, when a doctor does not get proper history of the case, any body to assist, no books of reference, no council to advice, no laboratory to investigate, no time to carry on clinical investigation, he has to decide quickly as to what line of action to take and he can either mend the case or end the case permanently; for that particular case his verdict is final. There is no appeal before a higher court or a federal court to undo the wrong done by the lower court. His judgment in the form of actions as medical attendant of a case is the final and hence it is easy to understand the high standard of efficiency, high standard of sense of judgment and equity based on various experiences, a medical man is expected to possess.

Therefore, I suggest that any amount of money which can be spent in the upkeep of a strong militia of expert and experienced medical men ready to fight the national menace of the outbreak of diseases is a gilt-edged investment yielding immediate and steady returns in increased productive capacity.

Rural Medical Centres

About 90 per cent of the people of India live in the rural areas and the basic problem before the country is the provision of sufficient health protection for these people and therefore the focal point of all health programme must start from the village area.

In view of the scarcity of medical men when the total strength of the doctors in whole of India is about 48 thousand for such a vast and widely scattered population, the services of trained Vaidya and Hakims may be taken into consideration but legislative measure must be adopted that they must put Hakim, Vaidya before their names and not Doctor to avoid misunderstanding among the public. Facilities must be made for village communications and provision should be made for sufficient number of ambulances and travelling dispensaries for easy transport of patients and distribution of medicine.

Expenditure on Public Health

The British Government in India used to spend a larger amount of their revenue in the upkeep of a vast number of army because they needed it very badly and used to spend a small fraction of the annual expenditure, the percentage varying from 2·5 to 7·3 but in their own country in Great Britain during 1934-35 they spent about 20 per cent in their programme for health protection. In Independent India the percentage of total expenditure in public health should be raised to 25 per cent at least by the Government of India and the Provincial Governments.

Finally, I would request the Government of India and the various Provincial Governments to keep the health programme and the rural medical aid in the forefront of their national objectives and the members of the medical profession are sure to help the Governments in all such porgressive efforts.

Jai Hind.

List of books and papers presented to Dr. N. P. Tripathi, while on tour.

1. Memorandum and Articles of Association and bye-laws of the British Medical Association, 1947.
2. Health Centre Committee Enquiry, 1947-48.
3. Dr. Revens, the Secretary of the Health Centre Committee, 1947-48.
4. Report of the Ministry of Health from the year ended 31st March, 1946-47 and the state of public health.
5. Report on Maternal Morbidity and Mortality in Scotland, Department of Health of Scotland.
6. Report on the state of the Public Health during six years of war, 1946.
7. The Institute of Almoners, Report, 1946.
8. Medical Social works in Hospitals.
9. The care and the treatment of the elderly and infirms.
10. Report of the Committee of Homeless Children, 1946.
11. Tuberculosis in England and Wales during the last war by Sir Weldon Darlymple Champneys.
12. When you are old. B.M.A. Publication.
13. Outline of the proposals for the improvement of the Health Services Department of Health, Irish Free State, Dublin.
14. Hertfordshire County Council Tuberculosis history sheets and form and papers.
15. Annual report of the Centre Middlesex County Hospital.
16. Queen Charlottes Maternity Hospital history sheet form.
17. British Medical Association on Maternity Services Act.
18. Dr. Seymour's file on Scotland Maternity and Child Welfare Health visitors and Maternity services in Scotland.

N.B.—Books submitted to the office of the Bihar Provincial Medical Association, Patna.

CASE NOTES

RELAPSING FEVER (LOUSE-BORNE) IN NORTH-EAST BENGAL

ATUL CHAKRABARTY, M.B.,
S.M.O., Central Dooars T.E., Dooars

The object of recording these notes is the fact that this was for the first time some cases of relapsing fever (*louse-borne*) were seen round about the district. This year we have had many new recruits as garden labour force, the number being unexpected and most of them being *paharies*. As a rule they were very dirty and of unclean habits and their heads were heavily infested with lice.

It is the dictum of our garden medical practice to examine the blood slide under microscope of any case reporting for fever and this routine practice is strictly followed. During the routine examination of blood slide of one of these new recruits who reported to out-patient department for rise in temperature, some spiral-shaped organisms were found. These slides were sent to Central Laboratory for opinion and were diagnosed as *treponema recurrenti*. These slides were stained with Geimsa's stain. Altogether so far we had about nine cases from four families and they were all treated in the garden hospital as isolated and segregated cases.

Relapsing fever is an acute specific disease characterised by fever of sudden onset, a few days duration and rapid subsidence with a tendency to relapse at short regular intervals. It may be due to louse-borne (*treponema recurrenti*) and due to tic bite (*Treponema Duttoni*).

All these cases reported sick with the same type of complaints, *e.g.*, (1) high rise of temperature with rigor; (2) pain all over the body, marked particularly round about the joints; (3) severe headache—average duration being three days and (4) constipation. Maximum temperature was upto 104°F. The patients were delirious.

On examination—Tongue coated, liver and spleen enlarged and the right hypochondrium tender. No rashes were found. Heart—nothing abnormal detected. Lungs—rales and rhonchi. Reflexes and jerks—nothing abnormal. No neck rigidity. Pulse—120 p.m., regular in volume and of moderate tension. Respiration 28 p.m. and regular. On the 5th and 6th day of their illness the temperature came down by crisis and touched the normal line but again on the next day the temperature rose upto a maximum of 101°F and came down by crisis. Since then the temperature continued to be normal but the pains all over the body and headache persisted. No jaundice was seen.

Laboratory report—In each case blood for M.P. —nil; *Treponema recurrenti* was found.

TREATMENT

The following lines of treatment were followed:

Isolation and Segregation—The patients were isolated and segregated in a separate wards in the hospital.

Disinfection—The introduction of D.D.T. as a disinfestation agent has been an event of the greatest importance. The dramatic part it played in checking the threatened epidemic amongst the labour force of the garden who are habitually of unclean habits, has been greatly merited by its trial in our garden. We used it in the following ways: (1) by impregnation of under garments; (2) by dusting individuals including children and babies and (3) by spraying on walls, floors, beddings, etc.

A powder containing 10 per cent D.D.T. in chalk was used. The amount required per person depended on the amount of clothings worn but on the average about 1½ oz., were needed for one application and for beddings, spare clothings another 1½ oz. were needed. This powder was applied by dust guns (I.C.I.) and the dust gun seemed to be very efficient.

(*a*) The head was dusted. In some cases the heads were shaved.

(*b*) The powder was dusted by inserting the gun inside the sleeves of the garments and round about the garments. In some cases the clothings were taken off and those were dusted and the whole body was powdered with.

(*c*) Some of the labourers wear more than one layer of clothing and the powder was dusted between underwear and shirt as well as between underwear and skin. The powder was blown inside quite liberally.

(*d*) The clothings and the "Patti" round about the waist were loosened and a generous dose of powder was blown on the crutch and pubic area.

(*e*) In dusting extra clothings, blankets and beddings, the delivery tube of the spray gun was always between the surfaces to be dusted. Blankets were treated by folding twice, piling one on top of the other and dusting between two layers.

(*f*) The labourers dusted were specially instructed not to wash their body for one week.

After powdering their head when the lice were falling on the sheet spread on the ground all the people witnessing disinfestation came forward and they themselves very gladly and energetically were using the powder. We have had very good response from the labourers.

(*g*) The walls, floor, ceiling and all the "Machangs" were thoroughly and generously sprayed with 5 per cent solution of D.D.T. emulsion. Particular attention was paid to the crevices, cracks, etc.

Anti-malarial squad specially trained in D.D.T. work was employed. They were also well guarded and necessary precaution was taken.

Medicinal—During the height of fever and pyrexia N.A.B. 0·15 grm. was injected I.V. after taking all

necessary precautions and the same dose was repeated again on the next pyrexial period. Cold water sponging and ice bag on the head; alkali mixture with potassium bromide 10 grs. was given *t.d.s.;* plenty of fluids and during convalescence iron tonic was given.

Summary

1. 9 cases of relapsing fever occurred in the district.

2. All cases were new *pahari* recruits and from the same line.

3. While examining blood for M.P., Treponema recurrenti were found.

4. Response to N.A.B. treatment.

5. Effect of D.D.T. on lice and on checking threatened epidemic.

6. While doing blood examination particularly of the new recruits, one should be careful to detect spiral-shaped organisms.

Acknowledgment

Lastly I express my gratitude to C.M.O. Dr. Arther for his valuable advice regarding the cases and I am thankful to R. C. Sinha, Anti-malaria worker, who detected the spiral-like organisms while examining the blood slides for M.P.

SPONTANEOUS SUBARACHNOID HAEMORRHAGE

V. V. G. TILAK, M.D.
AND
G. KUTUMBA RAO, M.B.B.S.,
Ellore, West Godavary

It is rarely that a practitioner comes across a case of intracranial aneurysm. At the London Hospital 1:125 of postmortems conducted on brains showed intracranial aneurysms. We do not think the same ratio applies for postmortems done in teaching institutions in India. Subarachnoid haemorrhage as a result of intracranial aneurysms is also extremely rare in hospitals attached to the teaching institutions. When such is the case we consider ourselves very fortunate to have seen one case of subarachnoid haemorrhage as a result of intracranial aneurysm.*

A lady aged 35 years was brought to our clinic on 29-12-47 and her complaint was severe headache, for five days.

Family history—This point is of interest because it seems that subarachnoid hæmorrhage occurred in two members of the same family. She had two sisters and two brothers, but recently (four months back) one younger brother died at the age of 24 years. I was taken to see him when he was ill. He was having severe headache for two days. He was very irritable. There was rigidity of the neck. Kernig's sign was positive. The rest of the system was normal. The parents were advised to bring the patient to the clinic, and it was not followed. After sometime we heard that he was no more. This point is of interest because it seems that subarachnoid hæmorrhage occurred in two members of the same family. The patient has six children, five males and one girl. There is no history of abortions or still births.

Past history—She used to have attacks of headache now and then since five years. She used to vomit during the attack. The attack never lasted for more than a day or two. No history of injury to the head.

Present history—On 24th of December while she was talking to her father she suddenly felt that a blow was given on the head and since then she had been suffering from intense headache. There was no effort precipitating the attack. Her family physician treated her for four days and on the fifth day she was brought to our clinic. She was not able to lie in any posture, and tossing in the bed due to the intense headache. The pain was radiating down the back of the neck.

On Examination—She was answering questions intelligently, but very irritable. There was rigidity of the neck. Kernig's sign was positive. Both the pupils were reacting to light normally. There were no petechial hæmorrhages on the body, finger tips were not tender.

Nervous system—Sensations were normal. Deep reflexes were normal. Plantars were extensor on both sides. Fundus examination revealed no evidence of any subhyaloid hæmorrhage. The discs were normal, no haemorrhages along the vessels.

Lumbar puncture—The fluid was blood-stained and coming under great pressure. Even after waiting for sometime it was still the same. The blood was intimately mixed with the fluid. It did not clot on standing. On centrifuging the specimen, the supernatant fluid was found to be yellow. These findings differentiate it from blood oozing into the subarachnoid space as a result of puncture. Then we concluded that it was a case of subarachnoid haemorrhage, probably as a result of rupture of intracranial aneurysm.

Cardiovascular system—Heart borders were normal, sounds normal, no murmurs were heard in any of the areas.

Pulse 60 a minute, of good volume and tension. The slowness of the pulse was probably due to increased intracranial tension. Blood pressure 116/80 mm. of mercury.

Respiratory and gastrointestinal systems were normal.

Temperature: 99·2 F.

Treatment

She was put to bed and absolute rest was given. Omnopon ¼ gr. was administered twice daily for the first four days and later it was given in the evenings till she improved. All this was done so as to relieve her of the headache and give rest.

Lumbar puncture was done daily at a therapeutic measure and the findings given below.

On 30-12-'47—The fluid was still blood-stained but the intensity was less. It was still flowing under pressure and the supernatant fluid was yellowish,

* One is not entitled to call this hæmorrhagic condition as "intracranial aneurysm" unless it is proved by post mortem examination or by arteriography.—Ed., *J. Indian M. A.*

On 31-12-'47—The fluid was still coming under slightly increased pressure and slightly blood-stained.

On 1-1-'48—The fluid was yellowish, centrifuged specimen showed a few red cells.

On 2-1-'48—The fluid was yellowish and pressure was normal.

This repetition of the lumbar puncture has the double effect of lowering the intracranial tension, and removing the extravasated blood which acts as a meningeal irritant.

The fluid should be withdrawn slowly so as to avoid the risk of dislodging the clot.

Diet—During the attack she was given light diet consisting of milk, barley and glucose water.

After the tenth day of the attack, the headache had subsided except for occasional spells for an hour or two during the day. She was discharged after three weeks and was asked to lie in bed for three weeks more.

Comment

In the absence of hypertension and hæmorrhagic diathesis the most common cause of subarachnoid haemorrhage is rupture of an aneurysm in the circle of Willis. The aneurysm may be symptomatic prior to rupture if it is big and situated anteriorly, in which case it produces pressure symptoms due to pressure on the cavernous sinus and the nerves emerging in its wall. It may be asymptomatic before rupture, when it is situated posteriorly. Except for occasional attacks of headache it may be silent. In this case we presume that it was situated posteriorly.

Pathology—Turnbull and Forbus have shown that these aneurysms are saccular dilatations of the cerebral arteries due to medial degeneration independent of inflammation. They almost invariably spring from the point of junction of two arteries, either a junction in the circle of Willis or at the point of origin of a branch. Turnbull is of opinion that these aneurysms are probably due to inherent weakness of the vessel wall, the result of a congenital abnormality in the structure of the arteries at a point of junction. They may also coexist along with other congenital abnormalities as coarctation of the aorta and cutaneous naevi.

Prognosis—Sooner or later a very large percentage about 80 per cent (Fearnsides series) of these aneurysms rupture. In Taylor and Whitfield's series of 81 cases of subarachnoid hæmorrhage, 63·4 per cent died in hospital. In Magee's series, the mortality rate was 56 per cent. Recurrences are common in 50 per cent of the cases. They may recur at any time during life, but usually they recur in about three months. There is a possibility of ligating these vessels. Dandy and Jefferson have attempted ligature of a vessel or vessels supplying the aneurysm but it raises difficult surgical problems and is by no means devoid of risk.

Treatment—As regards the treatment we wish to say that although there is a conservative school of thought which advocates that repeated lumbar punctures should not be done, we felt that the risk is not great when the fluid is withdrawn slowly. Our patient improved well with the repetition of lumbar punctures.

A CASE OF BRONZED DIABETES (?)

N. P. KUNDU, M.B., CAPT., I.M.S. (LATE),
Pabna, East Pakistan

During early part of second week of July, 1948, I was called in to see a case, 4 miles away from Pabna town, who was previously treated without any improvement. On taking the history I gathered that the patient, H. M. 48, was suffering from symptoms of blood pressure for the last four years nearly and for the last one year or a little more his urine frequently showed moderate sugar and slight albumin on examination. About 2¼ years back he had an attack of severe cholera and since then he could not regain his normal health. Before sugar was found in his urine gradually developing emaciation was noticed. B. P. was taken a few weeks back and I was told it was not high. No history or signs of syphilis could be elicited. On examination the following were observed:—

(1) A pigmentation of the skin which was marked over both shins.

(2) A hard and moderately enlarged liver.

(3) Moderate sugar and trace of albumin in the urine.

(4) Necrotic gingivitis.

(5) The spleen was palpable only on deep inspiration.

(6) Lungs normal.

(7) Right margin of the heart normally situated and the apex beat a little down and out but inside the mid-clavicular line.

(8) Marked emaciation.

(9) Slight occasional pyrexia (99° to 100°F.).

(10) Symptoms of insanity of which there was a previous history.

(11) Blood count and aldehyde test totally eliminated K.A. W.R. or Kahn's test not being possible at Pabna could not be done. So my diagnosis was bronzed diabetes with diabetic gangrene of gums or Vincent's infection—the necrotic material from gums not being examined bacteriologically. The necrotic gingivitis could not be improved with antiseptic mouthwashes, penicillin injections and protamine zinc insulin injections. The case expired within 3 weeks from my first visit.

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CALCUTTA, JUNE, 1949

THE CHOPRA COMMITTEE REPORT
NEITHER FISH, NOR FLESH, NOR GOOD RED HERRING

The proverbial mountain was in labour and it produced the same proverbial mouse, which, considered from the utilitarian point of view, may be called, 'neither fish, nor flesh, nor good red herring'! We shall make use of the abbreviation—Ch. C.—for the Chopra Committee, for convenience of reference. The Ch. C. has failed to profit by the suggestions of the I.M.A. The I.M.A. formulated a plan as to the *modus operandi* of working out an all-comprehensive system of scientific medicine out of the morass of so many so-called systems of Indigenous Medicine. It recommended that all descriptions of drugs and diseases, theories and hypotheses in those systems should be examined and interpreted after scientific scrutiny. Whatever stands the test of the crucible should be absorbed and synthesised into the corpus of the world knowledge of scientific medicine.

We have in this issue a special article contributed by Dr. B. Srinivasacharya on the Chopra Committee report. The article is a threadbare exposition of the holes in its texture and the weakness in its fibres.

A wrong method of synthesis—The Ch. C. has recommended an altogether wrong method of approach. They have sought to combine in their recommended courses of study, the curricula of the Indigenous System of Medicine, just as they are, with merely an ornamental filigree of western medicine. The report has been, all through its length and breadth, a continuous pleading in favour of the retention and expansion of this hybrid and hotch-potch course of study. This has been experimented upon in the Government School of Indigenous Medicine at Madras. The result has been a complete failure. The combination of contradictory views has created confusion in the minds of the alumnii, suffering from mal-assimilation of half-baked knowledge of diseases and drugs. We may profit by some opinions in this connection. Dr. M. G. Kini says "In Madras there is an indigenous school of medicine . . . the alumnii of the same school engineered several strikes on the ground of insufficient teaching, . . . the school which has been in existence for over 25 years, has failed to build up the teaching standards, even though adequate opportunities were provided to the school. This shows that there is something definitely defective in its organisation and the intrinsic worth of the type of medical education that has been adopted in this institution . . . It is unwise to waste our time, energy and money in adopting Charaka and Sushruta technique in surgery to-day, but it would be interesting to know, in more detail, what our ancients did. In progressive thinking a historical back-ground gives a better perspective." (Presidential Address. Ninth Annual Conference of the Association of Surgeons of India, at Bombay, 26th December, 1947). Dr. M. R. Guruswami Mudaliar says: "It is admitted on all hands that these indigenous systems had stopped developing by 1000 A.D. and they are not correlated to modern sciences. The attempt to train doctors in these systems, as seen in Madras, is very unsatisfactory. The present L.I.M. students of Madras read their surgery in Rose and Carless and their physiology in Starling, Madhava Nidana is studied more as a classic than as a scientific treatise. The ambition to train students with a comparative knowledge of western and eastern systems of medicine may be laudable but wasteful as the students have not the proper grounding in either system." (Presidential Address, First Annual Conference of the Association of Physicians of India, Bombay, April 20, 1946). It should be the duty of politicians and medical men to build up an efficient system of medical relief, on a par with the modern scientific standard of other progressive countries and not to manufacture more ill-qualified practitioners and licensed quacks and let them loose on the public particularly in remote and helpless rural areas. The scheme of giving a six months training to vaidyas, untrained previously in any institutional course of practical and didactic study and authorise them to undertake medical, surgical and obstetrical relief in rural areas is not only foolish but fatal—according to modern values of human life. One cannot but gasp with wonder, therefore, when Dr. D. N. Banerjee, in order to utilise the existing Vaidyas in rural areas, as an immediate measure, submits seriously the following programme and remarks: "Just as an ordinary member of the public, having no previous training in medicine can get training and official recognition as compounder, dresser, dai, or sanitary inspector, an Ayurvedist, with knowledge in the art of healing, is better equipped for the study of these subjects and when given special training will undoubtedly be able to handle minor surgery, midwifery and public health work more efficiently." As for the 'special training' Dr. Banerjee says: "They may be given a refresher course for 6 months particularly in surgery, gynæcology, hygiene and preventive medicine, medical jurisprudence and toxicology and put in charge of hospital duties." . . . . "When placed in charge of hospitals, as surgeons, they must be put as assistants for about 2 years and then put in independent charge " So after 6 months refresher course they may be put in charge of hospital duties and after two more years of work as assistant they are to be placed in independent charge of hospitals as surgeons. We leave it to our readers to assess the gravity of responsibility for the above statement.

Dr. D. N. Banerjee has challenged the statement of the I.M.A., namely that, "Ayurveda of to-day has got no scientific surgery, midwifery . . . physics, chemistry and biology," and has attributed it to the gross ignorance of the framers of the document. He should have done better if he could have quoted or cited from Ayurveda even one chapter of these branches of science and presented it to our readers to show that it could be utilised at the present day for a student's curriculum for his qualifying course, otherwise he cannot help being himself accused by scientific people of seeing through coloured glasses and playing

with loaded dice. The pity of it is that Dr. Banerjee cannot feign to be ignorant of the fact that there is not a single description of even any of the old and well-known diseases of India such as malaria, kala-azar, tuberculosis and filariasis, etc., that can be utilised at the present day for any purpose other than for studying and tracing the interesting evolution of the History of Medicine. Indeed everyone will agree nevertheless that India is entitled to cherish her pride at that, for having made her earliest and most precious contribution to the world's knowledge of medicine.

The Ch. C. has sought to evolve a synthesised curriculum of indigenous and modern medicine. They have started with a wrong premise. They have not put the cart before the horse but have placed the old Indian cart before a modern motor car and have asked the modern engineer to put into it all the noble features of the latest automobile. Synthesis should have been thought of the other way round. Accept everything that modern science has accepted after centuries of painstaking experiment and observation. Throw out as much of it as you can prove wrong in the light of Ayurvedic or any other system of medicine or add to it as much as you can prove to be worthy of adding from the same source. The Ch. C. has itself expressed its awareness of the borrowing of powerful drugs and chemicals from modern medicine by indigenous practitioners and using them both perorally and parenterally. "Such borrowings," the Ch. C. says, "without proper training and understanding is briefly to inflict serious injury on many patients." Yet they have themselves recommended the same dangerous thing of 'little learning' conferred by a substandard qualification, the result of a mechanical mixture of incompatible teachings. Col. Chopra had himself said in his Indigenous Drugs of India (1933):—"After imparting instructions to the Ayurvedic students in modern Physiology, Bacteriology, Pathology, etc. to ask them to apply the doctrine of Vayu, Pittah and Kafa, etc., to explain the causation of disease cannot possibly be convincing to them and can bring nothing but chaos and discord to their minds. Students trained under such a system can neither be good at one nor the other." It is strange and inexplicable that Col. Chopra has played a complete somersault with his own views and has now recommended the very opposite. It is not unlikely as Dr. Srinivasacharya has suggested that he may have been influenced and overridden, this time, by considerations other than that of his own expert scientific knowledge. As regards research, the Ch. C. has indulged in careless and self-contradictory statements. It has said in one place—"the pharmacological and therapeutic values of many remedies should be fully investigated" and in another place—"there is not much use in spending time on the pharmacological research as generally understood to-day."

Under the plea of absorbing the existing Vaids of the country with the more ostensible but less real solicitude for providing mass medical relief for rural areas, the Ch. C. has sought to create five or six different categories of medical practitioners recognisable by the Government. They have recommended a short term of a licentiate course in Indian Medicine of 3 years. A still shorter course of 6 months only to absorb the vaids, whether trained or untrained. The highest course or the Degree course will be for 5 years. Each of these courses, will, of course, include varying quotas of curriculum from modern medicine.

These 3 new categories over and above the ones already existing in the licentiate and graduate standards of modern medicine will make confusion worse confounded in the administration of medical relief over this vast sub-continent. According to the recommendations of the Ch. C. all of these classes of practitioners will be at liberty to practise modern medicine, surgery and midwifery amongst the poor and innocent rural people and make them their guinea-pigs for gaining experience by experiment. They will be considered competent for Public Health and medicolegal works also. This is not all. To make matters worse, if worse were possible (!), the Ch. C. has recommended a sort of Diarchy (or perhaps Triarchy if Homœopathy is to be given a place also later on) in their proposal for a National Medical Board. There are to be "two autonomous sections, on terms of equality,—one the Indian Medical Council for Western Medicine and the other the Council of Indian Medicine," having fullest authority over laying down and maintaining their respective standards of teaching. There will be different registers for different classes of practitioners in western and Indian medicine perhaps subdivided into sections of 'institutionally trained', 'non-institutionally trained' or untrained, classes of them! The Ch. C. has completely ignored the counsel of great and wise scientific men and educationists who had nothing but the best interest of India and Indians in their hearts. Dr. Srinivasacharya has quoted liberally from them. Sir Nilratan Sircar in his Andhra University address on 7.9.1939 sounded, what may be called a prophetic note of warning against such retrograde measures of registering practitioners of the various so-called systems of medicine. "The proper move" he said, "should be to have only one medical science which has been worked out by the scientists all over the world, incorporating into it whatever good there may be in the indigenous medical sciences of the country. If India is to achieve her place among the first rank nations of the world, she must advance with the help of modern science and she must discourage retrograde measures of the sort that are being encouraged in some of the provinces without forethought and imagination." Sir P. C. Roy, the Father of Scientific Research in India, in his address on the occasion of the Foundation Day of the Calcutta Medical College in 1940 also uttered similar words of admonition:—

"The policy of passing off the indigenous systems of medicine as scientific systems of medicine, after putting a veneer of modern sciences like Physiology and Anatomy on them, does not seem to me to be the correct course. The policy should rather be to accept the modern scientific system of medicine as the nucleus round which the tested knowledge, derived from the indigenous systems of medicine may be gathered. All

our knowledge should be accumulated on scientific lines."

The Teaching of Ayurveda—The Ch. C. has conveniently ignored the fact that the teaching of the existing texts books of Ayurveda has become impracticable for want of a clear connotation of the technical terms used therein. There was a raging controversy for about 10 years between M.M. Kj. Gananath Sen, M.A., L.M.S., of Calcutta and Kj. Gangadhar Shastri Joshi about the meaning of the 5 fundamental terms of Anatomy, namely, Kala, Peshi, Snayu, Shira and Dhamani. The arguments and counter-arguments have been embodied in an interesting pamphlet brought out by the former entitled "Sanjna-panchaka-bimarsha". The meanings of other terms are equally ambiguous. *eg.*, Rasa, Meda, Majja, Hriday (as the centre of consciousness), etc. Besides the existing texts have been characterised by M.M. Gananath Sen as "bristling with inaccuracies of ages". So it is that the I.M.A. considers that these works may serve as suitable for the labour and lucubration of research scholars but they are unfit for the consumption of students for their qualifying courses. Charaka, Sushruta and Vagbhata have all been translated. Those who have an open mind will realise the truth of our contention by going through a few chapters of each of them. They will be impressed with their erudition and the width and catholicity of their vision, but will realise at the same time, the weakness and handicap they suffered from the time-bar of living so many centuries anterior to us.

Medicine—As regards medicine almost every formula of Ayurveda is an instance of the shot-gun method of polytherapy, where several dozens or scores of ingredients are combined with little regard for their chemical or pharmacological properties. They cannot lead to clear therapeutic conclusions. The constituent drugs will require testing, standardisation and careful clinical application before certain specific curative virtues are allotted to them. All such research cannot but be conducted on modern scientific lines.

Medical Relief—As regards efficiency of medical relief the I.M.A. must warn once again against all attempts at setting back the hands of the clock of scientific progress. It will be doing a grave disservice to India's millions as also to the cause of preventive and curative medicine, the noblest branch of science applied to the alleviation of human suffering. We quote here the words of wisdom that fell from the lips of The Hon'ble Minister for Health, Rajkumari Amrit Kaur at the closing session of the last All-India Medical Conference at Calcutta: "I view with very grave concern the policy that is being enunciated by some of our provinces, in the matter of lowering still further the standards of qualification of your great profession. The argument advanced in favour of such action is the lack of aid to rural areas. That lack exists to our eternal shame, but to try to solve it by turning out half-baked personnel is to defeat the very object in view. Why should the poor men be given second best in any case? . . . Cheap medicines and lower qualifications will not be cheaper even from the financial point of view. On the other hand they will not only lower the standards of your profession but they will, in the long run, cause havoc to the cause of the nation's health."

In view of the responsibilities involved, we endorse the remarks of Lt. Col. P. C. Dutta (Ch. C. report App. C. p. 458) that "the indigenous system of medicine, as it is generally practised to-day should be banned by legislation for treatment and care of the sick and relegated to our cultural museum" to commemorate, we may say, the *incunabula* of the History of Medicine. In order to ensure an orderly administration of Public Health in India, there must be "uniform all-India standards of professional and technical education for health personnel, centrally controlled." (Lt. General J. B. Hance and Lt. Col. D. P. McDonald—Ch. C. Report Vol. II, p. 286). Indigenous medicine should be made the subject of research and then the tested and approved, fruits of research should be utilised for inculcating students. Uniformity in the strength and standardisation of drugs and medical appliances is quite as important as uniformity in the standard of minimum registrable qualification as laid down by the Indian Medical Council. Therefore, there must be compulsory registration of pharmaceutists and compulsory examination for persons dispensing drugs. Creation of different medical councils for India as well as running parallel systems of medical education will result in a complete chaos of her Public Health administration. Over and above our national considerations we must be conscious of our international obligations also. We quote the words of Dr. K. C. K. E. Raja in this connection: "The Government of India, by becoming a member of the World Health Organisation will undertake certain responsibilities in the field of international health and that the Health Services developed in the country should therefore be such as to enable Government to fulfil these obligations . . . Participation by India in the standardisation of diagnostic procedure, in the development of international standards in respect of biological, phramaceutical, and similar products or in the study and report on 'administrative and social techniques affecting public health and preventive care' will become impossible unless he adopts the same system of medicine (the scientific system) which other nations have adopted for the organisation of state health services."

In conclusion we reiterate the memorandum submitted by us and published in Vol. II App. C, p. 441 of the Ch. C. report and appeal to the Government not to tinker and temporise with the problem but to provide the people with the essential requirements of medical relief as far up to the standard of other progressive countries of the world as possible.

NOTES AND NEWS

CARDIOLOGICAL SOCIETY OF INDIA

Cardiological Society of India Research Fellowship of the value of Rs. 3,000 (Rupees Three thousand only) for the year 1949-50 has been awarded to Dr. Miss H. M. Colabawalla of the K.E.M. Hospital, Bombay.

COLLEGE OF PHYSICIANS AND SURGEONS OF BOMBAY

Out of thirteen candidates who appeared at the D.O.M.S. Examination held in May, 1949, the following eight have passed:—

Agarwal, Devendra Pal; Chawla, Sewak Ram; Gada, Bhanji Umarshi; Javle, Sadashiv Martand; Joshi, Pranshanker Dayashanker; Lodha, Kalyan Mal; Mahashabde, Janardan Shankarrao and Singh, Premdan Gharakha.

PROTEST AGAINST SOVIET TYRANNY OVER SCIENCE

Sir Henry Dale, F.R.S., the eminent pharmacologist has resigned his Honorary membership in the Academy of Sciences of the U.S.S.R. In his letter to the President he points out that in 1942, the year in which he was elected to the Academy, the Royal Society of London elected Nicholas Vavilov to be one of its fifty foreign members. As first director of the Lenin Academy of Genetics, Vavilov was reputed to be of great assistance to agriculture in the Soviet Union. But for some unknown reason, possibly political, he fell out of favor with those who followed Lenin. Not till 1945 did the Royal Society discover that he had been dismissed and had disappeared with a number of co-workers in genetics at some unknown date between 1941 and 1943. Repeated inquiries addressed to the Russian Academy by the Royal Society asking only the date and place of his death received no reply. It is now clear what happened. Vavilov has been replaced by T. D. Lysenko, the advocate of a doctrine of evolution which, in effect, denies all progress since Lamarck's speculations appeared early in the nineteenth century. This is not the result of an honest and open conflict of scientific opinions. Lysenko's own statements show that his dogma has been established and enforced by the Central Committee of the Communist Party as conforming to the political philosophy of Marx and Lenin. Decrees of the Academy show only too clearly the political tyranny which exists. The distinguished neurophysiologist L. Orbeli, of the school of the great Pavlov, was dismissed from the secretaryship of the Department of Biological Sciences because he had failed to anticipate the decrees restricting all teaching in genetics to the politically imposed orthodoxy. Since Galileo many attempts have been made to suppress scientific truth. None have been a success; the last was Hitler's. Dale concludes that he cannot continue an association which might appear to condone such tyranny.—*J.A.M.A.*

SEXUAL OFFENDERS

".....in regard to sexual offenders, punishment without treatment is not likely to have a beneficial effect; indeed, it can make these offenders worse, and thus more likely to repeat their offences. In a high proportion of cases imprisonment without treatment may have consequences to the community even more dangerous than to the offenders themselves."

In stating this belief the Joint Committee on Psychiatry and the Law, appointed under the chairmanship of Dr. Doris Odlum by the British Medical Association and the Magistrates Association, will have the suport of almost the whole profession. Their opinion can doubtless be substantiated by figures: certainly our present penal system does not prevent recidivism in other types of offence as Mr. Claud Mullins (who was a member of the committee) indicate in his address to the Royal Society of Medicine last year. The committee point out that some, and probably many, sexual offenders can be classed as suffering from mental illness to which the aberrant conduct is related; from character deviation (including cases of people who are mentally normal apart from their sexual abnormality); from gross or slight defect of the intelligence; from moral defect not associated with defect of intelligence; or from physical disorders (such as cerebral arteriosclerosis or endocrine changes). The group of character deviations includes the cases of inversion and perversion, some of which are amenable to treatment. The numbers of offenders who fall under one or other of these headings are sufficient, the committee hold, to warrant special provision being made for them. As regards hemosexuals, they think there may be a good case for bringing English law into line with that in most European countries, where the law does not concern itself with homosexual conduct in private between consenting adults. Apart from the difficulty of enforcing them, laws penalising such conduct offer encouragement to blackmail. (The anxiety and prejudice which homosexuality is apt to excite probably has its roots in painful repressed memories). Psychiatrists regard homosexual behaviour as evidence of a pathological state which may well be amenable to treatment—an arrest of the emotions at less than adult level. Mere punishment, and particularly imprisonment (which places the offender in a purely homosexual environment) is unlikely to result in cure; indeed the committee were concerned to find how many of those found guilty of any sexual offence are sent to ordinary prisons, probably in most cases without treatment.

Nevertheless they regard it as important to establish guilt where it exists. Juries are often unwilling to convict in these cases, either because they are loth to believe the facts or because they do not appreciate their gravity for the victim. It is seldom in the offender's best interests to acquit him; he needs treatment, and often this might best be given, the committee believe, in "special institutions" such as those recommended in the East-Hubert report. These would be within the prison service and would provide residential psychiatric treatment where offenders needing it

would be obliged to stay for a period. The Home Secretary should have power, the committee think, to discharge offenders, regardless of the length of their sentences, when they could safely be set at liberty. They are opposed to short-term sentences, which give no time for curative treatment and are ineffective as a deterrent.

To protect children from the strain imposed by waiting months to give evidence about offences committed against them, and from the rigours of cross-examination, the report proposes that such cases should be tried at juvenile courts, or else at assizes or quarter sessions by the presiding judge, recorder, or chairman, assisted by two magistrates experienced in juvenile court work. When a sexual offender has been convicted the court should be obliged to seek the advice of a duly qualified medical practitioner, or better a team such as that used in children-guidance clinics. If evidence on the mental health of the prisoner is needed during the trial, a psychiatrist should be called, not by the prosecution or defence, but by the court, and should be open to cross-examination by both sides.

The report as a whole is temperate, and should appeal to all who wish to see criminal procedure in these cases brought into line with modern knowledge.—*Lancet,* **1**:449, 1949.

CORRESPONDENCE

The Editor is not responsible for any views expressed by contributors.—EDITOR.

INDULGENCE TO QUACKERY

Sir,—Much had been told on this matter from various platforms specially by the I.M.A. and A.I.M.L.A. So very little is left to speak on this subject. But it is utter surprising that neither the then British Government nor the present National Government of India has shown any interest to check this nuisance. On the other hand the action of our National Government of India has proved that, they are not at all ready to accept the Licentiate diploma holders to be sufficiently qualified men to hold responsibility for the safety of the lives of her men; thereby no appointments are given to the licentiates in any responsible post in any hospital or the dispensaries and depriving them from the military services, though there is no objection either from any non-official organisation or from any circle of the public to allow the licentiates to be posted at the responsible post where the treatment of the disease is concerned.

I cannot understand how could it be explained that, while the Government is not satisfied with the knowledge of the diploma holders how the same Government can allow the "quacks" to carry on their practices on allopathic medicine in the various "cosmoplitan" towns with the suburban industrial areas. Even the examples may be sited that the "quacks" are working as M.O. in some reputed factories, though there are factory inspectors to look after this thing; and probably this type of medical men will be found to work as M.O. in some Government aided charitable dispensaries. In every day practice it is found that the drugs like penicillin, streptomycin and various other poisonous drugs are being abused by them. They are also found to push I.V. injection like N.A.B., Urea-Stibamine and glucose etc. and these drugs are also sold to them without any restriction.

One funny thing is that, the registered medical practitioners holding their own dispensary within the Calcutta Municipal area with its extension—in case they have got no passed compounders have got to submit a declaration to the municipal authorities every year stating that, all the prescriptions are served by himself. Now it is difficult to understand how in the same municipal area the allopathic medicines could be served from the dispensary where both the medical attendant and the compounder—if any—are "quacks". The unlucky registered medical men have got to pay taxes in excess for storing the allopathic medicines, on the other hand the quacks with the mercy of the so-called homoeopathic diplomas escape from the tax though they store the allopathic medicines in good quantity.

In this circumstances one has nothing to comment but to thank the ungrudging conscience of the Government. And further it is difficult to follow what is the necessity of keeping so many medical institutions at the expense of public money and abusing the energy of young brains for their education and the hard earned money of their parents. So, I think though it is late yet it is not too late to be the foremost duty of the Government to check "quackery" at once with a very rigid hand. And I.M.A. Central authorities should also take a lead to draw the attention of the Government to this matter. I am etc.

BIDHU BHUSAN MUKHERJEE,
(Jt. Hony. Secretary, I.M.A.,
North Howrah Branch)

30-3-49,
Howrah, West Bengal

MEDICAL LICENTIATES

Sir,—I read with interest the letter of Dr. D. N. Banerji, L.M.F., addressed to you and published in the last January, 1949, issue of the Journal of the I.M.A. (page 132) under the caption 'medical licentiates'. The letter narrates the vivid picture of the miserable plight of the licentiates who are struggling for their mere existence in the medical profession. They are ignored everywhere. The letter rightly emphasises—"Out to earn and to live these doctors can seldom secure a comfortable corner in the profession. Hard pressed by the M.B's. over congesting the towns and semi-towns on the one hand and the intractable regiment of the quacks of the village front on the other, these doctors find themselves placed

too tight in between the two horns of the dilemma "to live or not to live". The best or the most courageous of the lot shift to the villages with due humanitarian spirit to serve the poor ignorant people of the country. Here the rich do not pay these little doctors and the poor can't pay." The rich do not pay them as they look upon them as quacks; they remind that they are showing mercy by calling in a licentiate or that they have no other alternative but to call in a licentiate as the graduates are not available there. This is the thing going on every where.

It is said that the licentiates are given scope to make them graduates but we shall have to see how many are enjoying the facility. In Calcutta the Medical Colleges have done great injustice to the licentiates by keeping exorbitantly high tuition fees of Rs. 400/- per annum, whereas the tuition fees of a regular medical college student at Calcutta is Rs. 200/- per annum. I cannot understand the reason of this gulf of difference and how many licentiates will be benefited by it in Bengal where the economic condition is fast deteriorating. The days for passing fruitless resolutions are gone. We must come forward with our clearcut policy to rectify these defects.

Dr. D. N. Banerji in his letter had made two suggestions:—

(*a*) That the licentiates with professional experience of ten years or more be given a three months' training as refreshers course and allowed to sit for the final degree examination or (*b*) That there should be a competitive test examination among the candidates of both L.M.F. and M.B. applying for any Government service and shouuld be recruited on the basis of merits thus tested.

I commend the second suggestion to you sir and request you to give an effect to it. I am etc.

S. K. SAMONTA,
Member of the I.M.A.,
Chapra Branch (Bihar)

Chapra,
10-4-49.

NAGPUR MEDICAL SCHOOL

Sir,—Further details about this ill conceived Institution at Nagpur have now been published. The Central Province Government "have already approved of the syllabus for the three year's course.

The question of grant of certificates, diploma or licenses to the personnel passing out the course is under the consideration of Government. The intention of starting the course is to evolve within a minimum period necessary a class of medical personnel primarily suited for medical relief in the rural areas.

At present the qualification is not registrable with the Medical Council of the province. This question is also under the consideration of Government.

The fees will be Rs. 32 per term, each year consisting of three terms. For the present, the classes will be held *at night from 6 to 12 p.m.* (midnight). The courses of study will be almost the same as at present fixed for the Medical Course (Licentiates).

It is learnt that a press statement has been issued by the President of our Association. (No date has been given in which the statement has been issued and to my knowledge, it has not appeared in any of the Bombay Papers) I feel that this in itself will not prove to be an eye-opener to the adamant Central Province Government. The I.M.A. should not rest content with this, if it believes that the Nagpur affair is a retrograde step and against the considered opinion of the organised medical profession. In that case the I.M.A. should institute an All-India wide propaganda. A day of observance should be fixed and meetings should be held by all branches and protest resolutions should be sent to the Central Province and Central Government, and the press. A threat of some sort of Satyagraha should be offered and arrangements made to execute the same by inviting volunteers. A strong deputation should be sent to the Central Province and Central Governments. We have the backing of Rajkumari Amrit Kaur who has also condemned the scheme in unequivocal terms.

It is unfortunate that Medical Education is a provincial subject. We must aim at Interprovincial Uniformity in the standards and the Centre should not allow any lower standard than fixed by the Indian Medical Council. Provincial autonomy should not be allowed to be misused and abused by the whims and fancies of a few in the Health Ministry. Ministers may come and ministers may go but it is the country which will suffer in the long run and the poor products of these institutions who will have to suffer and repent at a later stage. I therefore, most sincerely and seriously implore on my colleagues to consider this question in all its bearings and act quickly and in time.

Any further delay is dangerous and we will be failing in our duty if Nagpur succeeds in its attempts to flout the decisions of the profession which have been arrived at after mature deliberation.

Central Province shall not be allowed to perpetuate the class distinction in the profession by manufacturing ill-equipped doctors and thus creating a situation which will prove a serious problem for the coming generation to deal with. I am, etc.

24-4-49,
Bombay.

U. B. NARAYANRAO.